

## Annotations - PepMix™ HBV (LEP) Ultra

HBV Large Envelope Protein, average coverage of 7258 different protein sequences is 83.1 %

All sequences are based on the HBV sequence database (HBVdb, hbvdb.ibcp.fr, Hayer J., Jadeau F., Deléage G., Kay A., Zoulim F., Combet C. (2013) HBVdb: a knowledge database for Hepatitis B Virus. *Nucleic Acids Res.*, **41**:D566-D570.).

### 1 Protein sequence is covered at 100 %:

X51970\_LHBs\_P-A

### 47 Protein sequences are covered at 92 %:

KX827296\_LHBs\_P-A; KX827295\_LHBs\_P-A; KX827294\_LHBs\_P-A; KF779375\_LHBs\_P-A;  
KF779368\_LHBs\_P-A; KF779364\_LHBs\_P-A; KF779363\_LHBs\_P-A; KF779362\_LHBs\_P-A;  
KF779361\_LHBs\_P-A; KF779359\_LHBs\_P-A; KF779354\_LHBs\_P-A; KF779342\_LHBs\_P-A;  
KF779335\_LHBs\_P-A; KF779331\_LHBs\_P-A; KF779328\_LHBs\_P-A; KF779312\_LHBs\_P-A;  
KF779277\_LHBs\_P-A; JQ707397\_LHBs\_P-A; JQ707396\_LHBs\_P-A; JQ707394\_LHBs\_P-A;  
JQ707393\_LHBs\_P-A; JQ707392\_LHBs\_P-A; JQ707391\_LHBs\_P-A; JQ707390\_LHBs\_P-A;  
JQ707389\_LHBs\_P-A; JQ707388\_LHBs\_P-A; JQ707387\_LHBs\_P-A; JQ707386\_LHBs\_P-A;  
JQ707385\_LHBs\_P-A; JQ707383\_LHBs\_P-A; JQ707382\_LHBs\_P-A; JQ707381\_LHBs\_P-A;  
JQ707379\_LHBs\_P-A; JQ707377\_LHBs\_P-A; JQ707376\_LHBs\_P-A; JQ707375\_LHBs\_P-A;  
JQ707373\_LHBs\_P-A; JQ707371\_LHBs\_P-A; JQ707338\_LHBs\_P-A; JQ707307\_LHBs\_P-A;  
JN604306\_LHBs\_P-A; JN604299\_LHBs\_P-A; JN604160\_LHBs\_P-A; JN604162\_LHBs\_P-A;  
KF779234\_LHBs\_P-A; AF090841\_LHBs\_P-A; JN604282\_LHBs\_P-A

### 15 Protein sequences are covered at 91 %:

KF779374\_LHBs\_P-A; KF779372\_LHBs\_P-A; KF779311\_LHBs\_P-A; KF779309\_LHBs\_P-A;  
KF779295\_LHBs\_P-A; KF779276\_LHBs\_P-A; KF779269\_LHBs\_P-A; KF779249\_LHBs\_P-A;  
KF779239\_LHBs\_P-A; JQ707395\_LHBs\_P-A; JQ707315\_LHBs\_P-A; AY233280\_LHBs\_P-A;  
JQ707332\_LHBs\_P-A; JQ707336\_LHBs\_P-A; JQ707380\_LHBs\_P-A

### 23 Protein sequences are covered at 90 %:

KF779365\_LHBs\_P-A; KF779358\_LHBs\_P-A; JQ707374\_LHBs\_P-A; JQ707321\_LHBs\_P-A;  
JQ707310\_LHBs\_P-A; JQ707304\_LHBs\_P-A; JQ707303\_LHBs\_P-A; KF779356\_LHBs\_P-A;  
KF779349\_LHBs\_P-A; KF779330\_LHBs\_P-A; JQ707322\_LHBs\_P-A; JN604319\_LHBs\_P-A;  
AM282986\_LHBs\_P-A; AY707087\_LHBs\_P-A; AY902775\_LHBs\_P-A; EU859939\_LHBs\_P-A;  
JF439767\_LHBs\_P-A; JF439777\_LHBs\_P-A; JF439774\_LHBs\_P-A; JF439768\_LHBs\_P-A;  
JF439769\_LHBs\_P-A; JF440022\_LHBs\_P-RF-AG; JF440019\_LHBs\_P-RF-AG

### 12 Protein sequences are covered at 89 %:

JQ707308\_LHBs\_P-A; JQ707372\_LHBs\_P-A; JQ707323\_LHBs\_P-A; JQ707342\_LHBs\_P-A;  
JQ707341\_LHBs\_P-A; JQ707339\_LHBs\_P-A; JQ707333\_LHBs\_P-A; JQ707320\_LHBs\_P-A;  
JQ707311\_LHBs\_P-A; JQ707302\_LHBs\_P-A; JQ707299\_LHBs\_P-A; JF440020\_LHBs\_P-A

### 226 Protein sequences are covered at 88 %:

JQ707398\_LHBs\_P-A; AB116079\_LHBs\_P-A; AB116080\_LHBs\_P-A; AB246337\_LHBs\_P-A;  
AB246338\_LHBs\_P-A; AB453979\_LHBs\_P-A; AB453980\_LHBs\_P-A; AB453981\_LHBs\_P-A;  
AB480038\_LHBs\_P-A; AB480041\_LHBs\_P-A; AB697489\_LHBs\_P-A; AB697491\_LHBs\_P-A;  
AB697495\_LHBs\_P-A; AB697496\_LHBs\_P-A; AB697497\_LHBs\_P-A; AB697498\_LHBs\_P-A;  
AB697499\_LHBs\_P-A; AB697501\_LHBs\_P-A; AB697503\_LHBs\_P-A; AB697504\_LHBs\_P-A;  
AB697505\_LHBs\_P-A; AB697507\_LHBs\_P-A; AB697508\_LHBs\_P-A; AB775198\_LHBs\_P-A;  
AB775200\_LHBs\_P-A; AB775201\_LHBs\_P-A; AB937792\_LHBs\_P-A; AB937793\_LHBs\_P-A;  
AB937794\_LHBs\_P-A; AF043580\_LHBs\_P-A; AJ012207\_LHBs\_P-A; AM295795\_LHBs\_P-A;



AM295797\_LHBs\_P-A; AY862868\_LHBs\_P-A; EU086721\_LHBs\_P-A; EU594383\_LHBs\_P-A;  
JN604173\_LHBs\_P-A; JN604158\_LHBs\_P-A; JF439766\_LHBs\_P-A; JF439765\_LHBs\_P-A;  
JF439764\_LHBs\_P-A; JF439763\_LHBs\_P-A; JF439761\_LHBs\_P-A; JF439759\_LHBs\_P-A;  
JF439758\_LHBs\_P-A; JF439757\_LHBs\_P-A; JF439756\_LHBs\_P-A; JF439755\_LHBs\_P-A;  
JF439754\_LHBs\_P-A; JF439753\_LHBs\_P-A; JF439752\_LHBs\_P-A; GU563562\_LHBs\_P-A;  
GU563558\_LHBs\_P-A; GU563554\_LHBs\_P-A; GU563546\_LHBs\_P-A; GQ477498\_LHBs\_P-A;  
GQ477461\_LHBs\_P-A; GQ414522\_LHBs\_P-A; FJ349224\_LHBs\_P-A; EU859942\_LHBs\_P-A;  
EU859937\_LHBs\_P-A; EU859936\_LHBs\_P-A; EU859935\_LHBs\_P-A; EU859931\_LHBs\_P-A;  
EU859930\_LHBs\_P-A; EU859929\_LHBs\_P-A; EU859928\_LHBs\_P-A; EU859927\_LHBs\_P-A;  
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EU859922\_LHBs\_P-A; EU859920\_LHBs\_P-A; EU859919\_LHBs\_P-A; EU859918\_LHBs\_P-A;  
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EU859913\_LHBs\_P-A; EU859912\_LHBs\_P-A; EU859911\_LHBs\_P-A; EU859910\_LHBs\_P-A;  
EU859909\_LHBs\_P-A; EU859908\_LHBs\_P-A; EU859906\_LHBs\_P-A; EU859905\_LHBs\_P-A;  
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EU859899\_LHBs\_P-A; EU859898\_LHBs\_P-A; EU594395\_LHBs\_P-A; EU594394\_LHBs\_P-A;  
EU594393\_LHBs\_P-A; EU594392\_LHBs\_P-A; EU594390\_LHBs\_P-A; EU594388\_LHBs\_P-A;  
AB697487\_LHBs\_P-A; JQ707400\_LHBs\_P-A; JQ707312\_LHBs\_P-A; JQ707399\_LHBs\_P-A;  
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JQ707405\_LHBs\_P-A; JQ707404\_LHBs\_P-A; JQ707403\_LHBs\_P-A; JQ707402\_LHBs\_P-A;  
JQ707331\_LHBs\_P-A; JQ707330\_LHBs\_P-A; JQ707328\_LHBs\_P-A; KF779348\_LHBs\_P-A;  
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KM606742\_LHBs\_P-A; KJ854710\_LHBs\_P-A; KJ843218\_LHBs\_P-A; KJ843217\_LHBs\_P-A;  
KJ843215\_LHBs\_P-A; KJ843214\_LHBs\_P-A; KJ843192\_LHBs\_P-A; KJ843188\_LHBs\_P-A;  
KJ843186\_LHBs\_P-A; KJ843182\_LHBs\_P-A; KJ843173\_LHBs\_P-A; KJ843166\_LHBs\_P-A;  
KF779385\_LHBs\_P-A; KF779379\_LHBs\_P-A; KF779378\_LHBs\_P-A; KF779369\_LHBs\_P-A;  
KF779360\_LHBs\_P-A; KF779355\_LHBs\_P-A; KF779351\_LHBs\_P-A; KF779350\_LHBs\_P-A;  
KF779339\_LHBs\_P-A; KF779338\_LHBs\_P-A; KF779337\_LHBs\_P-A; KF779329\_LHBs\_P-A;  
KF779310\_LHBs\_P-A; KF779304\_LHBs\_P-A; KF779299\_LHBs\_P-A; KF779279\_LHBs\_P-A;  
KF779266\_LHBs\_P-A; KF779262\_LHBs\_P-A; KF779258\_LHBs\_P-A; KF779256\_LHBs\_P-A;  
KF779253\_LHBs\_P-A; KF779251\_LHBs\_P-A; KF779245\_LHBs\_P-A; KF779244\_LHBs\_P-A;  
KF779243\_LHBs\_P-A; KF779240\_LHBs\_P-A; KF779227\_LHBs\_P-A; JX310732\_LHBs\_P-A;  
JX310731\_LHBs\_P-A; JX310725\_LHBs\_P-A; JX310724\_LHBs\_P-A; JX310721\_LHBs\_P-A;  
JQ707637\_LHBs\_P-A; JQ707636\_LHBs\_P-A; JQ707634\_LHBs\_P-A; JQ707633\_LHBs\_P-A;  
JQ707632\_LHBs\_P-A; JQ707631\_LHBs\_P-A; JQ707629\_LHBs\_P-A; JQ707627\_LHBs\_P-A;  
JQ707626\_LHBs\_P-A; JQ707624\_LHBs\_P-A; JQ707623\_LHBs\_P-A; JQ707622\_LHBs\_P-A;  
JQ707621\_LHBs\_P-A; JQ707620\_LHBs\_P-A; JQ707619\_LHBs\_P-A; JQ707618\_LHBs\_P-A;  
JQ707617\_LHBs\_P-A; JQ707614\_LHBs\_P-A; JQ707613\_LHBs\_P-A; JQ707612\_LHBs\_P-A;  
JQ707611\_LHBs\_P-A; JQ707610\_LHBs\_P-A; JQ707566\_LHBs\_P-A; JQ707565\_LHBs\_P-A;  
JQ707555\_LHBs\_P-A; JQ707546\_LHBs\_P-A; JQ707534\_LHBs\_P-A; JN604303\_LHBs\_P-A;  
JN604292\_LHBs\_P-A; JN604291\_LHBs\_P-A; JN604283\_LHBs\_P-A; JN604279\_LHBs\_P-A;  
JN604262\_LHBs\_P-A; JN604257\_LHBs\_P-A; JN604242\_LHBs\_P-A; JN604228\_LHBs\_P-A;  
JN604191\_LHBs\_P-A; JN604185\_LHBs\_P-A; JN604184\_LHBs\_P-A; JN604180\_LHBs\_P-A;  
JN604178\_LHBs\_P-A; JN604167\_LHBs\_P-A; KF779293\_LHBs\_P-A; EU594387\_LHBs\_P-A;  
JN604274\_LHBs\_P-A; AB933282\_LHBs\_P-RF-AG



**32 Protein sequences are covered at 87 %:**

KF779263\_LHBs\_P-A; JQ707324\_LHBs\_P-A; AY862867\_LHBs\_P-A; JN604164\_LHBs\_P-A; GQ477503\_LHBs\_P-A; EU859953\_LHBs\_P-A; JQ707419\_LHBs\_P-A; JQ707344\_LHBs\_P-A; JQ707319\_LHBs\_P-A; JQ707406\_LHBs\_P-A; KF779265\_LHBs\_P-A; KP718093\_LHBs\_P-A; KF779373\_LHBs\_P-A; KF779367\_LHBs\_P-A; KF779352\_LHBs\_P-A; KF779347\_LHBs\_P-A; KF779346\_LHBs\_P-A; KF779334\_LHBs\_P-A; KF779326\_LHBs\_P-A; KF779248\_LHBs\_P-A; KF779247\_LHBs\_P-A; KF779246\_LHBs\_P-A; KF779238\_LHBs\_P-A; JX310722\_LHBs\_P-A; JQ707625\_LHBs\_P-A; JN604315\_LHBs\_P-A; JN604300\_LHBs\_P-A; JN604297\_LHBs\_P-A; JN604268\_LHBs\_P-A; JN604266\_LHBs\_P-A; JN604247\_LHBs\_P-A; JN604200\_LHBs\_P-A

**108 Protein sequences are covered at 86 %:**

AF090839\_LHBs\_P-A; AB300367\_LHBs\_P-A; GQ477466\_LHBs\_P-A; GQ477484\_LHBs\_P-A; AB697506\_LHBs\_P-A; AB697512\_LHBs\_P-A; EU414132\_LHBs\_P-A; EU414133\_LHBs\_P-A; GQ477472\_LHBs\_P-A; EU859921\_LHBs\_P-A; EU859907\_LHBs\_P-A; EU594389\_LHBs\_P-A; KF779260\_LHBs\_P-A; JQ707314\_LHBs\_P-A; JQ707300\_LHBs\_P-A; KF476009\_LHBs\_P-A; GQ477486\_LHBs\_P-A; JQ707343\_LHBs\_P-A; JQ707317\_LHBs\_P-A; JQ707313\_LHBs\_P-A; Z35717\_LHBs\_P-A; KP718101\_LHBs\_P-A; KP718099\_LHBs\_P-A; KP718098\_LHBs\_P-A; KP718097\_LHBs\_P-A; KP718096\_LHBs\_P-A; KP718095\_LHBs\_P-A; KP718094\_LHBs\_P-A; KP718092\_LHBs\_P-A; KP718091\_LHBs\_P-A; KP718090\_LHBs\_P-A; KP718088\_LHBs\_P-A; KM606746\_LHBs\_P-A; KF779386\_LHBs\_P-A; KF779325\_LHBs\_P-A; KF779316\_LHBs\_P-A; KF779294\_LHBs\_P-A; KF779290\_LHBs\_P-A; KF779221\_LHBs\_P-A; KF476011\_LHBs\_P-A; KF476004\_LHBs\_P-A; KF475998\_LHBs\_P-A; KF475997\_LHBs\_P-A; KF475992\_LHBs\_P-A; KF475990\_LHBs\_P-A; KF475989\_LHBs\_P-A; KF475987\_LHBs\_P-A; KF475986\_LHBs\_P-A; JX096953\_LHBs\_P-A; JQ707609\_LHBs\_P-A; JQ707570\_LHBs\_P-A; JQ707562\_LHBs\_P-A; JQ707560\_LHBs\_P-A; JQ707556\_LHBs\_P-A; JQ707541\_LHBs\_P-A; JN604276\_LHBs\_P-A; KP274927\_LHBs\_P-A; KJ843216\_LHBs\_P-A; KF779366\_LHBs\_P-A; KF779317\_LHBs\_P-A; KF779257\_LHBs\_P-A; KF779232\_LHBs\_P-A; JX310723\_LHBs\_P-A; JQ707564\_LHBs\_P-A; JN604294\_LHBs\_P-A; JN604273\_LHBs\_P-A; JN604181\_LHBs\_P-A; KJ843172\_LHBs\_P-A; KF779371\_LHBs\_P-A; KF779308\_LHBs\_P-A; KF779307\_LHBs\_P-A; KF779306\_LHBs\_P-A; KF779305\_LHBs\_P-A; KF779281\_LHBs\_P-A; KF779280\_LHBs\_P-A; KF779273\_LHBs\_P-A; KF779271\_LHBs\_P-A; JQ707616\_LHBs\_P-A; JQ707569\_LHBs\_P-A; JQ707557\_LHBs\_P-A; JQ707543\_LHBs\_P-A; JN604293\_LHBs\_P-A; JN604216\_LHBs\_P-A; AB116081\_LHBs\_P-A; AB116078\_LHBs\_P-A; AB480036\_LHBs\_P-A; AY128092\_LHBs\_P-A; EU859944\_LHBs\_P-A; GQ477467\_LHBs\_P-A; GQ477496\_LHBs\_P-A; EU859949\_LHBs\_P-A; EU859948\_LHBs\_P-A; EU859947\_LHBs\_P-A; EU859946\_LHBs\_P-A; EU859940\_LHBs\_P-A; JF439869\_LHBs\_P-A; JF439871\_LHBs\_P-A; JF439874\_LHBs\_P-A; JF439876\_LHBs\_P-A; JF439877\_LHBs\_P-A; JF439878\_LHBs\_P-A; JF439879\_LHBs\_P-A; JF439880\_LHBs\_P-A; JF439881\_LHBs\_P-A; JF439882\_LHBs\_P-A; JF439883\_LHBs\_P-A; JQ707411\_LHBs\_P-A; JQ707414\_LHBs\_P-A

**19 Protein sequences are covered at 85 %:**

GQ477504\_LHBs\_P-A; KF476014\_LHBs\_P-A; KF475991\_LHBs\_P-A; KF475982\_LHBs\_P-A; JQ707547\_LHBs\_P-A; JQ707301\_LHBs\_P-A; KP718102\_LHBs\_P-A; KF779286\_LHBs\_P-A; KF476002\_LHBs\_P-A; KF475985\_LHBs\_P-A; KF779291\_LHBs\_P-A; KF779283\_LHBs\_P-A; KF779254\_LHBs\_P-A; JQ687533\_LHBs\_P-A; KJ843184\_LHBs\_P-A; JN604240\_LHBs\_P-A; AB453983\_LHBs\_P-A; GQ477488\_LHBs\_P-A; AF090838\_LHBs\_P-A

**111 Protein sequences are covered at 84 %:**

EU594386\_LHBs\_P-A; DQ788725\_LHBs\_P-A; GU563553\_LHBs\_P-A; GU563557\_LHBs\_P-A; JQ707378\_LHBs\_P-A; GQ477482\_LHBs\_P-A; AB937798\_LHBs\_P-A; AB116077\_LHBs\_P-A; GQ477462\_LHBs\_P-A; EU859900\_LHBs\_P-A; JF439977\_LHBs\_P-A; AM295798\_LHBs\_P-A; AM295799\_LHBs\_P-A; AM410963\_LHBs\_P-A; EU859945\_LHBs\_P-A; JF439945\_LHBs\_P-A; JF439946\_LHBs\_P-A; JF439947\_LHBs\_P-A; JF439948\_LHBs\_P-A; JF439950\_LHBs\_P-A;



JF439953\_LHBs\_P-A; JF439954\_LHBs\_P-A; JF439962\_LHBs\_P-A; JF439967\_LHBs\_P-A;  
JF439969\_LHBs\_P-A; JF439974\_LHBs\_P-A; JF439978\_LHBs\_P-A; JF439986\_LHBs\_P-A;  
JF439980\_LHBs\_P-A; AB697492\_LHBs\_P-A; GQ477487\_LHBs\_P-A; GQ477468\_LHBs\_P-A;  
EU859943\_LHBs\_P-A; EU859941\_LHBs\_P-A; EU859933\_LHBs\_P-A; EU859932\_LHBs\_P-A;  
EU594384\_LHBs\_P-A; KF475988\_LHBs\_P-A; AB263406\_LHBs\_P-A; KF476010\_LHBs\_P-A;  
KF475999\_LHBs\_P-A; KF475993\_LHBs\_P-A; JQ707573\_LHBs\_P-A; JQ707408\_LHBs\_P-A;  
JN604179\_LHBs\_P-A; KF779336\_LHBs\_P-A; KF779274\_LHBs\_P-A; KF779252\_LHBs\_P-A;  
KF476007\_LHBs\_P-A; KF475996\_LHBs\_P-A; KF475995\_LHBs\_P-A; KF475984\_LHBs\_P-A;  
KF475983\_LHBs\_P-A; JX096952\_LHBs\_P-A; JQ707568\_LHBs\_P-A; JQ707567\_LHBs\_P-A;  
JQ707563\_LHBs\_P-A; JQ707532\_LHBs\_P-A; JQ687529\_LHBs\_P-A; KF779381\_LHBs\_P-A;  
KF779268\_LHBs\_P-A; JX310730\_LHBs\_P-A; JQ707681\_LHBs\_P-A; JQ707675\_LHBs\_P-A;  
JQ707674\_LHBs\_P-A; JQ707672\_LHBs\_P-A; JQ707670\_LHBs\_P-A; JQ707669\_LHBs\_P-A;  
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KF779333\_LHBs\_P-A; KF779315\_LHBs\_P-A; KF779297\_LHBs\_P-A; JQ707630\_LHBs\_P-A;  
JN604304\_LHBs\_P-A; JN604204\_LHBs\_P-A; JF439833\_LHBs\_P-A; JF439838\_LHBs\_P-A;  
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JF439835\_LHBs\_P-A; JF439837\_LHBs\_P-A; EU859938\_LHBs\_P-A; JF439828\_LHBs\_P-A;  
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**26 Protein sequences are covered at 83 %:**

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KF779259\_LHBs\_P-A; KF779272\_LHBs\_P-A; KF476005\_LHBs\_P-A; JQ707538\_LHBs\_P-A;  
JQ707558\_LHBs\_P-A; JQ707615\_LHBs\_P-A; JX125367\_LHBs\_P-A; JQ707549\_LHBs\_P-A;  
KF779231\_LHBs\_P-A; JQ707535\_LHBs\_P-A; KF779322\_LHBs\_P-A; JF439832\_LHBs\_P-A;  
JF439820\_LHBs\_P-A; AB064314\_LHBs\_P-A; KJ586809\_LHBs\_P-A; EU747320\_LHBs\_P-A;  
JF439873\_LHBs\_P-A; JF440021\_LHBs\_P-RF-AG

**94 Protein sequences are covered at 82 %:**

JF439927\_LHBs\_P-A; GQ184323\_LHBs\_P-A; JF439944\_LHBs\_P-A; GQ477491\_LHBs\_P-A;  
JF439952\_LHBs\_P-A; EU859955\_LHBs\_P-A; EF208113\_LHBs\_P-A; AB453984\_LHBs\_P-A;  
JF439991\_LHBs\_P-A; JF439987\_LHBs\_P-A; JF439762\_LHBs\_P-A; JF439989\_LHBs\_P-A;  
AB697493\_LHBs\_P-A; JF439951\_LHBs\_P-A; JF439956\_LHBs\_P-A; JF439963\_LHBs\_P-A;  
HE576989\_LHBs\_P-A; GU563555\_LHBs\_P-A; JQ707559\_LHBs\_P-A; KF779264\_LHBs\_P-A;  
KF476000\_LHBs\_P-A; JQ707551\_LHBs\_P-A; AF536524\_LHBs\_P-A; KF779215\_LHBs\_P-A;  
KF779213\_LHBs\_P-A; JQ707536\_LHBs\_P-A; KX827297\_LHBs\_P-A; KF476001\_LHBs\_P-A;  
JQ707676\_LHBs\_P-A; JQ707663\_LHBs\_P-A; JQ707647\_LHBs\_P-A; JQ707554\_LHBs\_P-A;  
JQ707553\_LHBs\_P-A; JQ707552\_LHBs\_P-A; JQ707542\_LHBs\_P-A; JQ707540\_LHBs\_P-A;  
JQ707533\_LHBs\_P-A; JQ707531\_LHBs\_P-A; KF779370\_LHBs\_P-A; KF779324\_LHBs\_P-A;  
KF779323\_LHBs\_P-A; KF779282\_LHBs\_P-A; KF779270\_LHBs\_P-A; KF475994\_LHBs\_P-A;  
JQ707640\_LHBs\_P-A; JQ707635\_LHBs\_P-A; JN604197\_LHBs\_P-A; KX827298\_LHBs\_P-A;  
KU605532\_LHBs\_P-A; KF779319\_LHBs\_P-A; JQ707550\_LHBs\_P-A; JF439865\_LHBs\_P-A;  
JF439845\_LHBs\_P-A; JF439843\_LHBs\_P-A; JF439858\_LHBs\_P-A; JF439860\_LHBs\_P-A;  
JF439859\_LHBs\_P-A; JF439834\_LHBs\_P-A; GQ477494\_LHBs\_P-A; GQ477480\_LHBs\_P-A;  
GQ477465\_LHBs\_P-A; AF537371\_LHBs\_P-A; X70185\_LHBs\_P-A; JQ707316\_LHBs\_P-A;  
JQ707354\_LHBs\_P-A; JQ707362\_LHBs\_P-A; JQ707364\_LHBs\_P-A; KF214663\_LHBs\_P-A;



AB300364\_LHBs\_P-B; FJ386583\_LHBs\_P-B; FJ386584\_LHBs\_P-B; GU815568\_LHBs\_P-B;  
GU815566\_LHBs\_P-B; GU815564\_LHBs\_P-B; GU815560\_LHBs\_P-B; GU815559\_LHBs\_P-B;  
GU815556\_LHBs\_P-B; GU815555\_LHBs\_P-B; GU815553\_LHBs\_P-B; GU815552\_LHBs\_P-B;  
GU815551\_LHBs\_P-B; GQ924610\_LHBs\_P-B; KC774389\_LHBs\_P-B; KC774385\_LHBs\_P-B;  
KC774378\_LHBs\_P-B; JX661482\_LHBs\_P-B; KC774387\_LHBs\_P-B; KC774386\_LHBs\_P-B;  
KC510660\_LHBs\_P-B; KC510659\_LHBs\_P-B; KC510644\_LHBs\_P-B; KU964164\_LHBs\_P-B;  
KC792838\_LHBs\_P-B; AB222708\_LHBs\_P-RF-AD

**45 Protein sequences are covered at 81 %:**

AY233286\_LHBs\_P-A; AB549213\_LHBs\_P-A; JF439973\_LHBs\_P-A; JF439961\_LHBs\_P-A;  
JF439957\_LHBs\_P-A; JF439984\_LHBs\_P-A; JF439979\_LHBs\_P-A; GQ477490\_LHBs\_P-A;  
KF779383\_LHBs\_P-A; KF476006\_LHBs\_P-A; JQ707571\_LHBs\_P-A; KF476015\_LHBs\_P-A;  
JQ707545\_LHBs\_P-A; AJ309369\_LHBs\_P-A; JF439981\_LHBs\_P-A; GQ477501\_LHBs\_P-A;  
JF439870\_LHBs\_P-A; JF439875\_LHBs\_P-A; AY152726\_LHBs\_P-A; JQ707348\_LHBs\_P-A;  
JQ707357\_LHBs\_P-A; JQ707347\_LHBs\_P-A; JQ707361\_LHBs\_P-A; JN604261\_LHBs\_P-A;  
JN604171\_LHBs\_P-A; EU410082\_LHBs\_P-A; AY934767\_LHBs\_P-A; JN604169\_LHBs\_P-A;  
AF043560\_LHBs\_P-A; JN604252\_LHBs\_P-A; KP168432\_LHBs\_P-A; KJ854706\_LHBs\_P-A;  
KJ854705\_LHBs\_P-A; KJ854704\_LHBs\_P-A; KJ854702\_LHBs\_P-A; KJ854697\_LHBs\_P-A;  
KJ854687\_LHBs\_P-A; KJ843183\_LHBs\_P-A; KM606748\_LHBs\_P-A; KJ854707\_LHBs\_P-A;  
KJ854700\_LHBs\_P-A; KJ854694\_LHBs\_P-A; GU815549\_LHBs\_P-B; EU939562\_LHBs\_P-C;  
KU964341\_LHBs\_P-C

**81 Protein sequences are covered at 80 %:**

KF779320\_LHBs\_P-A; JF439915\_LHBs\_P-A; JF439914\_LHBs\_P-A; JF439988\_LHBs\_P-A;  
JF439939\_LHBs\_P-A; JF439932\_LHBs\_P-A; JF439934\_LHBs\_P-A; JF439936\_LHBs\_P-A;  
JF439940\_LHBs\_P-A; JF439965\_LHBs\_P-A; JF439968\_LHBs\_P-A; JF439928\_LHBs\_P-A;  
JF439923\_LHBs\_P-A; KF779298\_LHBs\_P-A; EU594391\_LHBs\_P-A; EU859954\_LHBs\_P-A;  
GU563550\_LHBs\_P-A; JF439959\_LHBs\_P-A; HE576988\_LHBs\_P-A; EU594385\_LHBs\_P-A;  
JQ707572\_LHBs\_P-A; KF779255\_LHBs\_P-A; JF439982\_LHBs\_P-A; KX827293\_LHBs\_P-A;  
KF779321\_LHBs\_P-A; JQ707658\_LHBs\_P-A; JQ707649\_LHBs\_P-A; JQ707638\_LHBs\_P-A;  
JF439840\_LHBs\_P-A; GQ477464\_LHBs\_P-A; GQ477500\_LHBs\_P-A; GQ477493\_LHBs\_P-A;  
EU859951\_LHBs\_P-A; JF439825\_LHBs\_P-A; JF439822\_LHBs\_P-A; JF439872\_LHBs\_P-A;  
JQ707370\_LHBs\_P-A; AY934769\_LHBs\_P-A; AY934774\_LHBs\_P-A; AY934770\_LHBs\_P-A;  
FM199979\_LHBs\_P-A; FM199978\_LHBs\_P-A; KJ854686\_LHBs\_P-A; KP168433\_LHBs\_P-A;  
KJ854693\_LHBs\_P-A; GU815561\_LHBs\_P-B; GU815569\_LHBs\_P-B; JX661478\_LHBs\_P-B;  
GU815576\_LHBs\_P-B; GU815575\_LHBs\_P-B; GU815570\_LHBs\_P-B; GU815567\_LHBs\_P-B;  
GU815565\_LHBs\_P-B; GU815563\_LHBs\_P-B; GU815562\_LHBs\_P-B; GU815558\_LHBs\_P-B;  
GU815548\_LHBs\_P-B; KC510651\_LHBs\_P-B; KC793101\_LHBs\_P-B; KU964155\_LHBs\_P-B;  
KC774231\_LHBs\_P-C; KC774348\_LHBs\_P-C; KC774342\_LHBs\_P-C; KC774264\_LHBs\_P-C;  
FJ386662\_LHBs\_P-C; KC774309\_LHBs\_P-C; GQ475336\_LHBs\_P-C; KC774302\_LHBs\_P-C;  
KC774266\_LHBs\_P-C; KC774185\_LHBs\_P-C; FJ562333\_LHBs\_P-C; KC774310\_LHBs\_P-C;  
KC774232\_LHBs\_P-C; EU939617\_LHBs\_P-C; KJ173349\_LHBs\_P-RF-CB; KC774305\_LHBs\_P-RF-CB;  
KC774186\_LHBs\_P-RF-CB; KC774349\_LHBs\_P-RF-CB; KC774341\_LHBs\_P-RF-CB; KC774263\_LHBs\_P-  
RF-CB; AB453985\_LHBs\_P-RF-AC

**45 Protein sequences are covered at 79 %:**

JF439937\_LHBs\_P-A; JX125364\_LHBs\_P-A; JF439938\_LHBs\_P-A; KF476008\_LHBs\_P-A;  
JF439993\_LHBs\_P-A; JF439960\_LHBs\_P-A; KF476013\_LHBs\_P-A; JQ707607\_LHBs\_P-A;  
JQ707594\_LHBs\_P-A; JF439985\_LHBs\_P-A; JF439983\_LHBs\_P-A; KF779287\_LHBs\_P-A;  
X02763\_LHBs\_C-A; JQ707539\_LHBs\_P-A; Z72478\_LHBs\_P-A; JF439853\_LHBs\_P-A;  
GQ477479\_LHBs\_P-A; JQ707346\_LHBs\_P-A; JQ707352\_LHBs\_P-A; JQ707353\_LHBs\_P-A;  
JQ707355\_LHBs\_P-A; JQ707356\_LHBs\_P-A; JQ707359\_LHBs\_P-A; JQ707360\_LHBs\_P-A;





JQ707363\_LHBs\_P-A; JQ707365\_LHBs\_P-A; JQ707369\_LHBs\_P-A; FJ692588\_LHBs\_P-A;  
FJ692590\_LHBs\_P-A; DQ020003\_LHBs\_P-A; AB937796\_LHBs\_P-A; AB937791\_LHBs\_P-A;  
KF214660\_LHBs\_P-A; KF922437\_LHBs\_P-A; KF922435\_LHBs\_P-A; KU736920\_LHBs\_P-A;  
KJ854690\_LHBs\_P-A; KX357645\_LHBs\_P-A; KJ854695\_LHBs\_P-A; KP168434\_LHBs\_P-A;  
KF922428\_LHBs\_P-A; KF922427\_LHBs\_P-A; KF922426\_LHBs\_P-A; KC774333\_LHBs\_P-C;  
GQ377635\_LHBs\_P-RF-BC

**288 Protein sequences are covered at 78 %:**

KF779332\_LHBs\_P-A; AY738140\_LHBs\_P-A; AY738141\_LHBs\_P-A; AY738142\_LHBs\_P-A;  
AY738139\_LHBs\_P-A; GQ477463\_LHBs\_P-A; JQ707575\_LHBs\_P-A; JQ707603\_LHBs\_P-A;  
JF439933\_LHBs\_P-A; GQ477478\_LHBs\_P-A; GQ477469\_LHBs\_P-A; JF439824\_LHBs\_P-A;  
JQ707606\_LHBs\_P-A; JQ707578\_LHBs\_P-A; KF476003\_LHBs\_P-A; JQ707350\_LHBs\_P-A;  
JF439972\_LHBs\_P-A; GQ477475\_LHBs\_P-A; GQ477473\_LHBs\_P-A; AB126580\_LHBs\_P-A;  
JQ707577\_LHBs\_P-A; GQ184324\_LHBs\_P-A; JF439992\_LHBs\_P-A; JQ707548\_LHBs\_P-A;  
JQ707537\_LHBs\_P-A; GU563551\_LHBs\_P-A; KM519454\_LHBs\_P-A; JX125368\_LHBs\_P-A;  
JN604290\_LHBs\_P-A; JF439839\_LHBs\_P-A; JF439836\_LHBs\_P-A; JF439847\_LHBs\_P-A;  
JF439846\_LHBs\_P-A; JF439851\_LHBs\_P-A; AB300366\_LHBs\_P-A; AB453982\_LHBs\_P-A;  
AB480039\_LHBs\_P-A; AB362931\_LHBs\_P-A; AB116076\_LHBs\_P-A; JQ707367\_LHBs\_P-A;  
JQ707349\_LHBs\_P-A; KU736918\_LHBs\_P-A; AF090842\_LHBs\_P-A; AB241114\_LHBs\_P-A;  
AB453987\_LHBs\_P-A; AB116087\_LHBs\_P-A; KF214661\_LHBs\_P-A; JN604145\_LHBs\_P-A;  
GU563545\_LHBs\_P-A; AM184126\_LHBs\_P-A; AY934763\_LHBs\_P-A; AY233284\_LHBs\_P-A;  
KF922408\_LHBs\_P-A; KU605536\_LHBs\_P-A; KU605537\_LHBs\_P-A; KU605538\_LHBs\_P-A;  
KU605539\_LHBs\_P-A; AY233279\_LHBs\_P-A; AY233276\_LHBs\_P-A; KF779384\_LHBs\_P-A;  
M57663\_LHBs\_P-A; KM519452\_LHBs\_P-A; KF922436\_LHBs\_P-A; LC051141\_LHBs\_P-A;  
KR905430\_LHBs\_P-A; KP168423\_LHBs\_P-A; KM519453\_LHBs\_P-A; KJ854692\_LHBs\_P-A;  
KX357650\_LHBs\_P-A; DQ993700\_LHBs\_P-B; DQ993701\_LHBs\_P-B; GU815739\_LHBs\_P-B;  
EU139543\_LHBs\_P-B; EU306700\_LHBs\_P-B; EU306701\_LHBs\_P-B; EU306702\_LHBs\_P-B;  
EU306706\_LHBs\_P-B; EU306708\_LHBs\_P-B; EU306712\_LHBs\_P-B; AB073829\_LHBs\_P-B;  
GQ377542\_LHBs\_P-B; GU815718\_LHBs\_P-B; GU815554\_LHBs\_P-B; GQ924653\_LHBs\_P-B;  
GQ924611\_LHBs\_P-B; AF100308\_LHBs\_P-B; AB195933\_LHBs\_P-B; GQ377569\_LHBs\_P-B;  
EU306698\_LHBs\_P-B; EU306697\_LHBs\_P-B; EU306695\_LHBs\_P-B; DQ993703\_LHBs\_P-B;  
DQ448626\_LHBs\_P-B; DQ448623\_LHBs\_P-B; DQ377158\_LHBs\_P-B; AF121249\_LHBs\_P-B;  
KC510642\_LHBs\_P-B; GU815742\_LHBs\_P-B; GU815740\_LHBs\_P-B; GU815737\_LHBs\_P-B;  
GU815732\_LHBs\_P-B; GU815730\_LHBs\_P-B; GU815729\_LHBs\_P-B; GU815727\_LHBs\_P-B;  
GU815725\_LHBs\_P-B; GU815724\_LHBs\_P-B; GU815721\_LHBs\_P-B; GU815720\_LHBs\_P-B;  
GU815719\_LHBs\_P-B; GU815717\_LHBs\_P-B; GU815716\_LHBs\_P-B; GU815712\_LHBs\_P-B;  
GU815711\_LHBs\_P-B; GU815677\_LHBs\_P-B; GU815676\_LHBs\_P-B; GU815675\_LHBs\_P-B;  
GU815674\_LHBs\_P-B; GU815673\_LHBs\_P-B; GU815672\_LHBs\_P-B; GU815669\_LHBs\_P-B;  
GU815668\_LHBs\_P-B; GU815667\_LHBs\_P-B; GU815666\_LHBs\_P-B; GU815665\_LHBs\_P-B;  
GU815664\_LHBs\_P-B; GU815663\_LHBs\_P-B; GU815662\_LHBs\_P-B; GU815661\_LHBs\_P-B;  
GU815660\_LHBs\_P-B; GU815659\_LHBs\_P-B; GU815654\_LHBs\_P-B; GU815652\_LHBs\_P-B;  
GU815650\_LHBs\_P-B; GU815649\_LHBs\_P-B; GU815648\_LHBs\_P-B; GU815647\_LHBs\_P-B;  
GU815633\_LHBs\_P-B; GU815632\_LHBs\_P-B; GU815623\_LHBs\_P-B; GU815571\_LHBs\_P-B;  
GU815550\_LHBs\_P-B; GQ924608\_LHBs\_P-B; GQ924605\_LHBs\_P-B; GQ924603\_LHBs\_P-B;  
GQ377643\_LHBs\_P-B; GQ377641\_LHBs\_P-B; GQ377558\_LHBs\_P-B; GQ377547\_LHBs\_P-B;  
GQ205440\_LHBs\_P-B; FJ386582\_LHBs\_P-B; EU570071\_LHBs\_P-B; EU570070\_LHBs\_P-B;  
EU564824\_LHBs\_P-B; EU564823\_LHBs\_P-B; EU306680\_LHBs\_P-B; EU306679\_LHBs\_P-B;  
DQ448621\_LHBs\_P-B; DQ448619\_LHBs\_P-B; AF479684\_LHBs\_P-B; AB471855\_LHBs\_P-B;  
AB287328\_LHBs\_P-B; AB246339\_LHBs\_P-B; AB073834\_LHBs\_P-B; AB073826\_LHBs\_P-B;  
AB073822\_LHBs\_P-B; KU963949\_LHBs\_P-B; JN406371\_LHBs\_P-B; JX429899\_LHBs\_P-B;



JQ341583\_LHBs\_P-B; KC792766\_LHBs\_P-B; KC774394\_LHBs\_P-B; KC774393\_LHBs\_P-B;  
KC774392\_LHBs\_P-B; KC774388\_LHBs\_P-B; KC774384\_LHBs\_P-B; KC774383\_LHBs\_P-B;  
KC510648\_LHBs\_P-B; KC510643\_LHBs\_P-B; JX869999\_LHBs\_P-B; JX661484\_LHBs\_P-B;  
JX661476\_LHBs\_P-B; JX661474\_LHBs\_P-B; JX661472\_LHBs\_P-B; JX507215\_LHBs\_P-B;  
JX507210\_LHBs\_P-B; JX429908\_LHBs\_P-B; JX429900\_LHBs\_P-B; JQ688405\_LHBs\_P-B;  
JF899335\_LHBs\_P-B; KJ173353\_LHBs\_P-B; KP148360\_LHBs\_P-B; KP148359\_LHBs\_P-B;  
KP148320\_LHBs\_P-B; KP148319\_LHBs\_P-B; KP148318\_LHBs\_P-B; KM359440\_LHBs\_P-B;  
KJ173369\_LHBs\_P-B; KC792893\_LHBs\_P-B; KM392072\_LHBs\_P-B; KJ173412\_LHBs\_P-B;  
KJ173411\_LHBs\_P-B; KC792798\_LHBs\_P-B; KU964092\_LHBs\_P-B; KU964088\_LHBs\_P-B;  
KU964087\_LHBs\_P-B; KU963855\_LHBs\_P-B; KU963841\_LHBs\_P-B; KU963840\_LHBs\_P-B;  
KU963839\_LHBs\_P-B; KU963838\_LHBs\_P-B; KU963837\_LHBs\_P-B; KU963836\_LHBs\_P-B;  
KU963834\_LHBs\_P-B; KU963832\_LHBs\_P-B; KU963831\_LHBs\_P-B; KU963830\_LHBs\_P-B;  
KU963829\_LHBs\_P-B; KU963828\_LHBs\_P-B; KU963813\_LHBs\_P-B; KU963812\_LHBs\_P-B;  
KU963811\_LHBs\_P-B; KU963810\_LHBs\_P-B; KU963809\_LHBs\_P-B; KU963808\_LHBs\_P-B;  
KU963807\_LHBs\_P-B; KU963806\_LHBs\_P-B; KU963805\_LHBs\_P-B; KU963804\_LHBs\_P-B;  
KU963803\_LHBs\_P-B; KU963802\_LHBs\_P-B; KU963801\_LHBs\_P-B; KU963800\_LHBs\_P-B;  
KU963799\_LHBs\_P-B; KP341008\_LHBs\_P-B; KP148366\_LHBs\_P-B; KP148364\_LHBs\_P-B;  
KP148362\_LHBs\_P-B; KP148332\_LHBs\_P-B; KP148329\_LHBs\_P-B; KP148327\_LHBs\_P-B;  
KP148323\_LHBs\_P-B; KJ410517\_LHBs\_P-B; KJ173425\_LHBs\_P-B; KJ173415\_LHBs\_P-B;  
KJ173414\_LHBs\_P-B; KJ173413\_LHBs\_P-B; KJ173410\_LHBs\_P-B; KJ173409\_LHBs\_P-B;  
KJ173408\_LHBs\_P-B; KJ173407\_LHBs\_P-B; KJ173406\_LHBs\_P-B; KJ173405\_LHBs\_P-B;  
KJ173400\_LHBs\_P-B; KJ173399\_LHBs\_P-B; KJ173382\_LHBs\_P-B; KJ173381\_LHBs\_P-B;  
KJ173374\_LHBs\_P-B; KJ173367\_LHBs\_P-B; KJ173359\_LHBs\_P-B; KJ173354\_LHBs\_P-B;  
KJ173352\_LHBs\_P-B; KJ173345\_LHBs\_P-B; KC793176\_LHBs\_P-B; KC793167\_LHBs\_P-B;  
KC793135\_LHBs\_P-B; KC793105\_LHBs\_P-B; KC793102\_LHBs\_P-B; KC793085\_LHBs\_P-B;  
KC792993\_LHBs\_P-B; KC792899\_LHBs\_P-B; KC792895\_LHBs\_P-B; KC792872\_LHBs\_P-B;  
KC792856\_LHBs\_P-B; KC792828\_LHBs\_P-B; KC792784\_LHBs\_P-B; KC792747\_LHBs\_P-B;  
KU964170\_LHBs\_P-C; KC774224\_LHBs\_P-C; JX125375\_LHBs\_P-C; JX125374\_LHBs\_P-C;  
JX125373\_LHBs\_P-C; FJ386624\_LHBs\_P-C; KJ173309\_LHBs\_P-C; AY641561\_LHBs\_P-C;  
GQ475338\_LHBs\_P-C; AB367417\_LHBs\_P-C; AY167096\_LHBs\_P-C; KC774246\_LHBs\_P-RF-CB

**354 Protein sequences are covered at 77 %:**

AY738143\_LHBs\_P-A; JQ707581\_LHBs\_P-A; JF439970\_LHBs\_P-A; JQ707596\_LHBs\_P-A;  
JF439930\_LHBs\_P-A; JF439931\_LHBs\_P-A; AJ309370\_LHBs\_P-A; KF476012\_LHBs\_P-A;  
JF439857\_LHBs\_P-A; JF439867\_LHBs\_P-A; JF439841\_LHBs\_P-A; JQ707366\_LHBs\_P-A;  
AM184125\_LHBs\_P-A; AY233278\_LHBs\_P-A; DQ020002\_LHBs\_P-A; AY934768\_LHBs\_P-A;  
FJ692599\_LHBs\_P-A; FJ692604\_LHBs\_P-A; KP234053\_LHBs\_P-A; FJ692601\_LHBs\_P-A;  
FJ692597\_LHBs\_P-A; KF214659\_LHBs\_P-A; FJ692566\_LHBs\_P-A; FJ692557\_LHBs\_P-A;  
FJ692574\_LHBs\_P-A; KJ854696\_LHBs\_P-A; KJ854703\_LHBs\_P-A; KJ854688\_LHBs\_P-A;  
KP718085\_LHBs\_P-A; FJ032352\_LHBs\_P-B; FJ032353\_LHBs\_P-B; FJ032354\_LHBs\_P-B;  
EU796067\_LHBs\_P-B; GU815733\_LHBs\_P-B; GU815572\_LHBs\_P-B; EU306696\_LHBs\_P-B;  
GU815658\_LHBs\_P-B; GU815646\_LHBs\_P-B; GQ924632\_LHBs\_P-B; GU815678\_LHBs\_P-B;  
GQ377587\_LHBs\_P-B; GQ377537\_LHBs\_P-B; FJ386655\_LHBs\_P-B; JX978431\_LHBs\_P-B;  
JQ801471\_LHBs\_P-B; JF412801\_LHBs\_P-B; KJ173348\_LHBs\_P-B; KJ173347\_LHBs\_P-B;  
JX869998\_LHBs\_P-B; KU963853\_LHBs\_P-B; KU963851\_LHBs\_P-B; KU963850\_LHBs\_P-B;  
KU963849\_LHBs\_P-B; KU963848\_LHBs\_P-B; KU963847\_LHBs\_P-B; KU963846\_LHBs\_P-B;  
KU963845\_LHBs\_P-B; KU963844\_LHBs\_P-B; KU963843\_LHBs\_P-B; KJ173351\_LHBs\_P-B;  
KJ173343\_LHBs\_P-B; KC793179\_LHBs\_P-B; KU964167\_LHBs\_P-B; KU964162\_LHBs\_P-B;  
KP148333\_LHBs\_P-B; KP148330\_LHBs\_P-B; KJ173421\_LHBs\_P-B; KJ173420\_LHBs\_P-B;  
KC774242\_LHBs\_P-C; KU964172\_LHBs\_P-C; KJ598661\_LHBs\_P-C; KJ598639\_LHBs\_P-C;



KJ598636\_LHBs\_P-C; KJ598635\_LHBs\_P-C; KC774359\_LHBs\_P-C; KC774347\_LHBs\_P-C;  
KC774320\_LHBs\_P-C; KC774276\_LHBs\_P-C; KC774182\_LHBs\_P-C; KU964048\_LHBs\_P-C;  
KU964047\_LHBs\_P-C; KU964046\_LHBs\_P-C; KU964045\_LHBs\_P-C; KU964044\_LHBs\_P-C;  
KU964041\_LHBs\_P-C; KU964040\_LHBs\_P-C; KU964038\_LHBs\_P-C; KU964037\_LHBs\_P-C;  
KU964036\_LHBs\_P-C; KU964035\_LHBs\_P-C; KU964034\_LHBs\_P-C; KU964002\_LHBs\_P-C;  
KU963997\_LHBs\_P-C; KU963996\_LHBs\_P-C; KU963992\_LHBs\_P-C; KR013873\_LHBs\_P-C;  
KP017272\_LHBs\_P-C; KP017271\_LHBs\_P-C; KP017269\_LHBs\_P-C; KJ803765\_LHBs\_P-C;  
KJ790199\_LHBs\_P-C; KJ173434\_LHBs\_P-C; KJ173433\_LHBs\_P-C; KJ173429\_LHBs\_P-C;  
KJ173428\_LHBs\_P-C; KJ173427\_LHBs\_P-C; KJ173426\_LHBs\_P-C; KJ173394\_LHBs\_P-C;  
KJ173393\_LHBs\_P-C; KJ173306\_LHBs\_P-C; KJ173296\_LHBs\_P-C; KJ173288\_LHBs\_P-C;  
KF053172\_LHBs\_P-C; KC793035\_LHBs\_P-C; KC792965\_LHBs\_P-C; KC792962\_LHBs\_P-C;  
KC792940\_LHBs\_P-C; KC792921\_LHBs\_P-C; KC792803\_LHBs\_P-C; KC792776\_LHBs\_P-C;  
KC792695\_LHBs\_P-C; KC792690\_LHBs\_P-C; KC792655\_LHBs\_P-C; KC774338\_LHBs\_P-C;  
KC774337\_LHBs\_P-C; KC774331\_LHBs\_P-C; KC774327\_LHBs\_P-C; KC774316\_LHBs\_P-C;  
KC774315\_LHBs\_P-C; KC774314\_LHBs\_P-C; KC774312\_LHBs\_P-C; KC774292\_LHBs\_P-C;  
KC774287\_LHBs\_P-C; KC774286\_LHBs\_P-C; KC774272\_LHBs\_P-C; KC774249\_LHBs\_P-C;  
KC774243\_LHBs\_P-C; KC774241\_LHBs\_P-C; KC774240\_LHBs\_P-C; KC774237\_LHBs\_P-C;  
KC774229\_LHBs\_P-C; KC774226\_LHBs\_P-C; KC774197\_LHBs\_P-C; JX661495\_LHBs\_P-C;  
JX661492\_LHBs\_P-C; JX504545\_LHBs\_P-C; JX429909\_LHBs\_P-C; JQ688404\_LHBs\_P-C;  
JQ341648\_LHBs\_P-C; FJ386614\_LHBs\_P-C; AB198077\_LHBs\_P-C; AB198078\_LHBs\_P-C;  
AB300365\_LHBs\_P-C; AB300359\_LHBs\_P-C; KC774238\_LHBs\_P-C; FJ715353\_LHBs\_P-C;  
KJ598638\_LHBs\_P-C; FJ715402\_LHBs\_P-C; FJ562291\_LHBs\_P-C; EU939566\_LHBs\_P-C;  
JN604148\_LHBs\_P-C; FJ787456\_LHBs\_P-C; KC774308\_LHBs\_P-C; KC774250\_LHBs\_P-C;  
KU964199\_LHBs\_P-C; KU964198\_LHBs\_P-C; KU964197\_LHBs\_P-C; KU964196\_LHBs\_P-C;  
KU964195\_LHBs\_P-C; KU964194\_LHBs\_P-C; KU964192\_LHBs\_P-C; KU964191\_LHBs\_P-C;  
KU964190\_LHBs\_P-C; KU964189\_LHBs\_P-C; KU964188\_LHBs\_P-C; KU964187\_LHBs\_P-C;  
KU964186\_LHBs\_P-C; KU964185\_LHBs\_P-C; KU963899\_LHBs\_P-C; KU963898\_LHBs\_P-C;  
KU963897\_LHBs\_P-C; KU963896\_LHBs\_P-C; KU963895\_LHBs\_P-C; KU963894\_LHBs\_P-C;  
KU963893\_LHBs\_P-C; KU963892\_LHBs\_P-C; KU963891\_LHBs\_P-C; KU963890\_LHBs\_P-C;  
KU963889\_LHBs\_P-C; KU963888\_LHBs\_P-C; KU963887\_LHBs\_P-C; KU963886\_LHBs\_P-C;  
KJ173440\_LHBs\_P-C; KJ173439\_LHBs\_P-C; KJ173337\_LHBs\_P-C; KJ173310\_LHBs\_P-C;  
KJ173289\_LHBs\_P-C; KJ173287\_LHBs\_P-C; KC774293\_LHBs\_P-C; KC774251\_LHBs\_P-C;  
KC774248\_LHBs\_P-C; KC774239\_LHBs\_P-C; KC774220\_LHBs\_P-C; KC774195\_LHBs\_P-C;  
KC774184\_LHBs\_P-C; KC774181\_LHBs\_P-C; JX504546\_LHBs\_P-C; JX429904\_LHBs\_P-C;  
JQ040162\_LHBs\_P-C; HM750138\_LHBs\_P-C; GQ475345\_LHBs\_P-C; GQ475341\_LHBs\_P-C;  
GQ475314\_LHBs\_P-C; GQ475308\_LHBs\_P-C; GQ475307\_LHBs\_P-C; GQ475306\_LHBs\_P-C;  
GQ377551\_LHBs\_P-C; GQ377527\_LHBs\_P-C; FJ715403\_LHBs\_P-C; FJ715383\_LHBs\_P-C;  
FJ715382\_LHBs\_P-C; FJ562283\_LHBs\_P-C; FJ386619\_LHBs\_P-C; FJ386609\_LHBs\_P-C;  
FJ386587\_LHBs\_P-C; EU939652\_LHBs\_P-C; EU939591\_LHBs\_P-C; EU939590\_LHBs\_P-C;  
DQ089793\_LHBs\_P-C; AB367420\_LHBs\_P-C; FJ715374\_LHBs\_P-C; FJ715375\_LHBs\_P-C;  
FJ715376\_LHBs\_P-C; FJ386588\_LHBs\_P-C; GQ377632\_LHBs\_P-C; AB642100\_LHBs\_P-C;  
AB900116\_LHBs\_P-C; AB198079\_LHBs\_P-C; AB198083\_LHBs\_P-C; AB300361\_LHBs\_P-C;  
AB050018\_LHBs\_P-C; EU554538\_LHBs\_P-C; GQ377523\_LHBs\_P-C; GQ377603\_LHBs\_P-C;  
KU964173\_LHBs\_P-C; HQ622095\_LHBs\_P-C; KJ173442\_LHBs\_P-C; KJ173312\_LHBs\_P-C;  
KJ173311\_LHBs\_P-C; KJ173303\_LHBs\_P-C; KJ173295\_LHBs\_P-C; KJ173292\_LHBs\_P-C;  
KC774304\_LHBs\_P-C; JQ040163\_LHBs\_P-C; HM750135\_LHBs\_P-C; HM750132\_LHBs\_P-C;  
GU434374\_LHBs\_P-C; GQ924633\_LHBs\_P-C; KR013779\_LHBs\_P-C; KT284753\_LHBs\_P-C;  
KR013797\_LHBs\_P-C; KR013784\_LHBs\_P-C; KR013783\_LHBs\_P-C; KR013782\_LHBs\_P-C;  
KM213037\_LHBs\_P-C; KC793187\_LHBs\_P-C; KC793039\_LHBs\_P-C; KC774326\_LHBs\_P-C;





KC774295\_LHBs\_P-C; KC774275\_LHBs\_P-C; KC774259\_LHBs\_P-C; KC774257\_LHBs\_P-C;  
KC774223\_LHBs\_P-C; JX429905\_LHBs\_P-C; GQ377600\_LHBs\_P-C; GQ377528\_LHBs\_P-C;  
FJ899776\_LHBs\_P-C; FJ787486\_LHBs\_P-C; EU560441\_LHBs\_P-C; DQ922651\_LHBs\_P-C;  
AF384371\_LHBs\_P-C; GQ377637\_LHBs\_P-C; GQ377617\_LHBs\_P-C; GQ377579\_LHBs\_P-C;  
GQ205441\_LHBs\_P-C; FJ562329\_LHBs\_P-C; FJ562327\_LHBs\_P-C; FJ562218\_LHBs\_P-C;  
FJ386639\_LHBs\_P-C; FJ386574\_LHBs\_P-C; FJ032359\_LHBs\_P-C; EU871982\_LHBs\_P-C;  
EU093918\_LHBs\_P-C; EU093916\_LHBs\_P-C; EU093913\_LHBs\_P-C; EU093909\_LHBs\_P-C;  
EU082431\_LHBs\_P-C; EU082430\_LHBs\_P-C; EU082429\_LHBs\_P-C; EU082428\_LHBs\_P-C;  
EU075342\_LHBs\_P-C; EU075338\_LHBs\_P-C; EU075334\_LHBs\_P-C; DQ993693\_LHBs\_P-C;  
AB675677\_LHBs\_P-C; AB670311\_LHBs\_P-C; KX276976\_LHBs\_P-C; KX276960\_LHBs\_P-C;  
KY022423\_LHBs\_P-C; KX276835\_LHBs\_P-C; EU660227\_LHBs\_P-RF-BC; KU963870\_LHBs\_P-RF-CB;  
KU963867\_LHBs\_P-RF-CB; KU963866\_LHBs\_P-RF-CB; KU963865\_LHBs\_P-RF-CB; KU963864\_LHBs\_P-  
RF-CB; KU963863\_LHBs\_P-RF-CB; KU963861\_LHBs\_P-RF-CB; KU963860\_LHBs\_P-RF-CB;  
KU963859\_LHBs\_P-RF-CB; KU963858\_LHBs\_P-RF-CB; KU963857\_LHBs\_P-RF-CB; KU963856\_LHBs\_P-  
RF-CB; KC774328\_LHBs\_P-RF-CB; KC774322\_LHBs\_P-RF-CB; KC774317\_LHBs\_P-RF-CB;  
KC774294\_LHBs\_P-RF-CB; JX429896\_LHBs\_P-RF-CB; HM750133\_LHBs\_P-RF-CB; GQ377611\_LHBs\_P-  
RF-CB; GQ377607\_LHBs\_P-RF-CB; AB198084\_LHBs\_P-RF-CB; EU787444\_LHBs\_P-RF-CB;  
Y18856\_LHBs\_P-RF-CB; KU964003\_LHBs\_P-RF-CB; KU964001\_LHBs\_P-RF-CB; KU963999\_LHBs\_P-RF-  
CB; KU963998\_LHBs\_P-RF-CB; KU963995\_LHBs\_P-RF-CB; KU963994\_LHBs\_P-RF-CB;  
KU963993\_LHBs\_P-RF-CB; KU963991\_LHBs\_P-RF-CB; KU963990\_LHBs\_P-RF-CB; KJ173300\_LHBs\_P-  
RF-CB; KJ173299\_LHBs\_P-RF-CB; KC774258\_LHBs\_P-RF-CB; KC774201\_LHBs\_P-RF-CB;  
KC774198\_LHBs\_P-RF-CB; JX661494\_LHBs\_P-RF-CB; JX026887\_LHBs\_P-RF-CB; AY167095\_LHBs\_P-RF-  
CB; KM213033\_LHBs\_P-RF-CB; KC774332\_LHBs\_P-RF-CB; GQ377544\_LHBs\_P-RF-CB

**144 Protein sequences are covered at 76 %:**

JF439921\_LHBs\_P-A; JF439958\_LHBs\_P-A; JF439976\_LHBs\_P-A; JF439942\_LHBs\_P-A;  
JF439929\_LHBs\_P-A; JQ707579\_LHBs\_P-A; JF439943\_LHBs\_P-A; KF779210\_LHBs\_P-A;  
KF779313\_LHBs\_P-A; AB205118\_LHBs\_P-A; JF439852\_LHBs\_P-A; JF439855\_LHBs\_P-A;  
EU859934\_LHBs\_P-A; JQ707337\_LHBs\_P-A; JQ707351\_LHBs\_P-A; AB116084\_LHBs\_P-A;  
JN182333\_LHBs\_P-A; FN545831\_LHBs\_P-A; AY233288\_LHBs\_P-A; JN182322\_LHBs\_P-A;  
JN182321\_LHBs\_P-A; JN182318\_LHBs\_P-A; KP234050\_LHBs\_P-A; GU563548\_LHBs\_P-A;  
JN182323\_LHBs\_P-A; JN182325\_LHBs\_P-A; JN182326\_LHBs\_P-A; JN182329\_LHBs\_P-A;  
FJ692608\_LHBs\_P-A; FJ349296\_LHBs\_P-A; AY233274\_LHBs\_P-A; AY934766\_LHBs\_P-A;  
KX357646\_LHBs\_P-A; FJ692578\_LHBs\_P-A; FJ692579\_LHBs\_P-A; FJ692580\_LHBs\_P-A;  
FJ692581\_LHBs\_P-A; FJ692582\_LHBs\_P-A; FJ692583\_LHBs\_P-A; FJ692584\_LHBs\_P-A;  
FJ692585\_LHBs\_P-A; HM535200\_LHBs\_P-A; KF476021\_LHBs\_P-A; AY233283\_LHBs\_P-A;  
AY233289\_LHBs\_P-A; KX648548\_LHBs\_P-A; KU605535\_LHBs\_P-A; KT347088\_LHBs\_P-A;  
KJ854701\_LHBs\_P-A; KX357643\_LHBs\_P-A; KJ717831\_LHBs\_P-B; KJ803817\_LHBs\_P-B;  
DQ993698\_LHBs\_P-B; FJ562231\_LHBs\_P-B; EU306710\_LHBs\_P-B; EU306705\_LHBs\_P-B;  
EU306709\_LHBs\_P-B; DQ448624\_LHBs\_P-B; DQ993704\_LHBs\_P-B; DQ993706\_LHBs\_P-B;  
DQ993707\_LHBs\_P-B; AF121244\_LHBs\_P-B; GU815764\_LHBs\_P-B; GU815761\_LHBs\_P-B;  
DQ448622\_LHBs\_P-B; GU815680\_LHBs\_P-B; JQ801479\_LHBs\_P-B; GU815618\_LHBs\_P-B;  
GU815557\_LHBs\_P-B; GQ377639\_LHBs\_P-B; GQ377625\_LHBs\_P-B; EF473975\_LHBs\_P-B;  
KP148356\_LHBs\_P-B; JQ341593\_LHBs\_P-B; KJ410500\_LHBs\_P-B; KC793001\_LHBs\_P-B;  
KP148363\_LHBs\_P-B; KP148325\_LHBs\_P-B; JQ412090\_LHBs\_P-B; KP148326\_LHBs\_P-B;  
KU963959\_LHBs\_P-B; KU963958\_LHBs\_P-B; KU963957\_LHBs\_P-B; KU963956\_LHBs\_P-B;  
KU963954\_LHBs\_P-B; KU963952\_LHBs\_P-B; KU963950\_LHBs\_P-B; KU963947\_LHBs\_P-B;  
KU963945\_LHBs\_P-B; KP148334\_LHBs\_P-B; KM875418\_LHBs\_P-B; KU964123\_LHBs\_P-B;  
KR152339\_LHBs\_P-B; KJ173365\_LHBs\_P-B; KJ598659\_LHBs\_P-C; KC774303\_LHBs\_P-C;  
KX276964\_LHBs\_P-C; KC792857\_LHBs\_P-C; KC774254\_LHBs\_P-C; KR013808\_LHBs\_P-C;



KJ598703\_LHBs\_P-C; KC774360\_LHBs\_P-C; KC774199\_LHBs\_P-C; KC774345\_LHBs\_P-C;  
KC774192\_LHBs\_P-C; KC774187\_LHBs\_P-C; JX504544\_LHBs\_P-C; JX429918\_LHBs\_P-C;  
JX429917\_LHBs\_P-C; JX026888\_LHBs\_P-C; GQ924649\_LHBs\_P-C; FJ715378\_LHBs\_P-C;  
FJ715380\_LHBs\_P-C; KC774255\_LHBs\_P-C; JX429915\_LHBs\_P-C; GQ475321\_LHBs\_P-C;  
GQ377584\_LHBs\_P-C; FJ562232\_LHBs\_P-C; JX429907\_LHBs\_P-C; KT284759\_LHBs\_P-C;  
JX661490\_LHBs\_P-C; FJ562330\_LHBs\_P-C; KC774216\_LHBs\_P-C; KC774215\_LHBs\_P-C;  
AB198080\_LHBs\_P-C; EU570067\_LHBs\_P-C; EU939578\_LHBs\_P-C; GQ377538\_LHBs\_P-C;  
JN604140\_LHBs\_P-C; KR013781\_LHBs\_P-C; KR013798\_LHBs\_P-C; EU093910\_LHBs\_P-C;  
EU093907\_LHBs\_P-C; EU093883\_LHBs\_P-C; EU082432\_LHBs\_P-C; GQ377533\_LHBs\_P-C;  
KX276973\_LHBs\_P-C; KJ173329\_LHBs\_P-RF-CB; GQ377634\_LHBs\_P-RF-CB; EU916239\_LHBs\_P-RF-CB;  
EU916241\_LHBs\_P-RF-CB; FJ386635\_LHBs\_P-RF-CB; FJ562287\_LHBs\_P-RF-CB; AY233277\_LHBs\_P-RF-  
AC

**232 Protein sequences are covered at 75 %:**

JF439941\_LHBs\_P-A; JF439916\_LHBs\_P-A; JF439913\_LHBs\_P-A; JF439922\_LHBs\_P-A;  
GQ477502\_LHBs\_P-A; KC875260\_LHBs\_P-A; JQ707587\_LHBs\_P-A; JQ707605\_LHBs\_P-A;  
JQ707358\_LHBs\_P-A; JQ707368\_LHBs\_P-A; AY373428\_LHBs\_P-A; KF214666\_LHBs\_P-A;  
AB116082\_LHBs\_P-A; JN182320\_LHBs\_P-A; JX154582\_LHBs\_P-A; JX154581\_LHBs\_P-A;  
JX154580\_LHBs\_P-A; JN182324\_LHBs\_P-A; JN182331\_LHBs\_P-A; EU054331\_LHBs\_C-A;  
KF214665\_LHBs\_P-A; KF922406\_LHBs\_P-A; KF476022\_LHBs\_P-A; KP168429\_LHBs\_P-A;  
KF476016\_LHBs\_P-A; FJ692571\_LHBs\_P-A; KJ854689\_LHBs\_P-A; KP168422\_LHBs\_P-A;  
GQ377561\_LHBs\_P-B; EU439020\_LHBs\_P-B; EU439018\_LHBs\_P-B; GQ377566\_LHBs\_P-B;  
GQ377568\_LHBs\_P-B; GU434373\_LHBs\_P-B; EU796066\_LHBs\_P-B; EU939677\_LHBs\_P-B;  
EF473974\_LHBs\_P-B; EU306707\_LHBs\_P-B; AF282917\_LHBs\_P-B; EU306703\_LHBs\_P-B;  
GU815578\_LHBs\_P-B; AY293309\_LHBs\_P-B; FJ386668\_LHBs\_P-B; GU815699\_LHBs\_P-B;  
GQ377588\_LHBs\_P-B; DQ448627\_LHBs\_P-B; FJ386684\_LHBs\_P-B; KC774391\_LHBs\_P-B;  
EU350409\_LHBs\_P-B; KC510649\_LHBs\_P-B; JQ341572\_LHBs\_P-B; GU815731\_LHBs\_P-B;  
GU815708\_LHBs\_P-B; GU815705\_LHBs\_P-B; GU815704\_LHBs\_P-B; GU815703\_LHBs\_P-B;  
GU815700\_LHBs\_P-B; GU815698\_LHBs\_P-B; GU815697\_LHBs\_P-B; GU815696\_LHBs\_P-B;  
GU815695\_LHBs\_P-B; GU815694\_LHBs\_P-B; GU815693\_LHBs\_P-B; GU815692\_LHBs\_P-B;  
GU815691\_LHBs\_P-B; GU815689\_LHBs\_P-B; GU815688\_LHBs\_P-B; GU815687\_LHBs\_P-B;  
GU815686\_LHBs\_P-B; GU815685\_LHBs\_P-B; GU815683\_LHBs\_P-B; GU815681\_LHBs\_P-B;  
GU815679\_LHBs\_P-B; GU815656\_LHBs\_P-B; GU815614\_LHBs\_P-B; GU815613\_LHBs\_P-B;  
GU815612\_LHBs\_P-B; GU815609\_LHBs\_P-B; GU815606\_LHBs\_P-B; GU815605\_LHBs\_P-B;  
GU815604\_LHBs\_P-B; GU815603\_LHBs\_P-B; GU815601\_LHBs\_P-B; GU815600\_LHBs\_P-B;  
GU815599\_LHBs\_P-B; GU815598\_LHBs\_P-B; GU815597\_LHBs\_P-B; GU815596\_LHBs\_P-B;  
GU815595\_LHBs\_P-B; GU815594\_LHBs\_P-B; GU815593\_LHBs\_P-B; GU815591\_LHBs\_P-B;  
GU815590\_LHBs\_P-B; GU815589\_LHBs\_P-B; GU815588\_LHBs\_P-B; GU815586\_LHBs\_P-B;  
GU815585\_LHBs\_P-B; GU815584\_LHBs\_P-B; GU815583\_LHBs\_P-B; GU815579\_LHBs\_P-B;  
GQ924631\_LHBs\_P-B; FJ787444\_LHBs\_P-B; FJ562321\_LHBs\_P-B; EU522074\_LHBs\_P-B;  
DQ448628\_LHBs\_P-B; DQ448620\_LHBs\_P-B; AY167089\_LHBs\_P-B; KP148328\_LHBs\_P-B;  
KC774390\_LHBs\_P-B; KC774382\_LHBs\_P-B; KC774381\_LHBs\_P-B; KC774363\_LHBs\_P-B;  
JX661473\_LHBs\_P-B; KC774379\_LHBs\_P-B; KC774370\_LHBs\_P-B; KP406291\_LHBs\_P-B;  
KJ803752\_LHBs\_P-B; KC792807\_LHBs\_P-B; KC792735\_LHBs\_P-B; KC510641\_LHBs\_P-B;  
JQ801514\_LHBs\_P-B; JQ801512\_LHBs\_P-B; JQ341584\_LHBs\_P-B; JQ341575\_LHBs\_P-B;  
JQ341574\_LHBs\_P-B; JQ341549\_LHBs\_P-B; JQ040173\_LHBs\_P-B; KP148357\_LHBs\_P-B;  
KU964152\_LHBs\_P-B; KU964151\_LHBs\_P-B; KU964150\_LHBs\_P-B; KU964148\_LHBs\_P-B;  
KU964147\_LHBs\_P-B; KU964145\_LHBs\_P-B; KU964144\_LHBs\_P-B; KU964142\_LHBs\_P-B;  
KU964140\_LHBs\_P-B; KU963989\_LHBs\_P-B; KU963988\_LHBs\_P-B; KU963985\_LHBs\_P-B;  
KU963984\_LHBs\_P-B; KU963983\_LHBs\_P-B; KU963982\_LHBs\_P-B; KU963981\_LHBs\_P-B;



KU963835\_LHBs\_P-B; KP406327\_LHBs\_P-B; KP148321\_LHBs\_P-B; KC793168\_LHBs\_P-B;  
KM875421\_LHBs\_P-B; KJ410490\_LHBs\_P-B; KJ173417\_LHBs\_P-B; KJ173416\_LHBs\_P-B;  
KJ173340\_LHBs\_P-B; KJ173339\_LHBs\_P-B; KU964091\_LHBs\_P-B; KU964090\_LHBs\_P-B;  
KU964089\_LHBs\_P-B; KU964086\_LHBs\_P-B; KU964085\_LHBs\_P-B; KU964084\_LHBs\_P-B;  
KU963975\_LHBs\_P-B; KU963974\_LHBs\_P-B; KU963973\_LHBs\_P-B; KU963972\_LHBs\_P-B;  
KU963971\_LHBs\_P-B; KU963969\_LHBs\_P-B; KU963966\_LHBs\_P-B; KU963965\_LHBs\_P-B;  
KU963964\_LHBs\_P-B; KU963961\_LHBs\_P-B; KU963960\_LHBs\_P-B; KC792981\_LHBs\_P-B;  
KU964134\_LHBs\_P-B; KU964133\_LHBs\_P-B; KU964132\_LHBs\_P-B; KU964130\_LHBs\_P-B;  
KU964129\_LHBs\_P-B; KU964128\_LHBs\_P-B; KU964127\_LHBs\_P-B; KU964126\_LHBs\_P-B;  
KU964125\_LHBs\_P-B; KU964124\_LHBs\_P-B; KU964083\_LHBs\_P-B; KP148335\_LHBs\_P-B;  
KM875417\_LHBs\_P-B; KJ173360\_LHBs\_P-B; KC793144\_LHBs\_P-B; KC793062\_LHBs\_P-B;  
KC793010\_LHBs\_P-B; KC792972\_LHBs\_P-B; KC792731\_LHBs\_P-B; KC792685\_LHBs\_P-B;  
FJ562221\_LHBs\_P-C; GQ377591\_LHBs\_P-C; KJ598716\_LHBs\_P-C; KC774271\_LHBs\_P-C;  
KJ173430\_LHBs\_P-C; KC774202\_LHBs\_P-C; KC774200\_LHBs\_P-C; FJ562269\_LHBs\_P-C;  
FJ562261\_LHBs\_P-C; KJ173302\_LHBs\_P-C; KJ173301\_LHBs\_P-C; KC774343\_LHBs\_P-C;  
FJ715409\_LHBs\_P-C; KC774194\_LHBs\_P-C; GQ377583\_LHBs\_P-C; AF461363\_LHBs\_P-C;  
AF461357\_LHBs\_P-C; AB014367\_LHBs\_P-C; AB367404\_LHBs\_P-C; DQ089799\_LHBs\_P-C;  
FJ562258\_LHBs\_P-C; FJ562272\_LHBs\_P-C; EU916238\_LHBs\_P-C; KC774313\_LHBs\_P-C;  
KR013786\_LHBs\_P-C; KJ173291\_LHBs\_P-C; JQ040131\_LHBs\_P-C; EU082435\_LHBs\_P-C;  
FJ562238\_LHBs\_P-C; EU093911\_LHBs\_P-C; DQ993692\_LHBs\_P-C; DQ993691\_LHBs\_P-C;  
DQ089798\_LHBs\_P-RF-CB; KU695742\_LHBs\_P-RF-CB; AY123424\_LHBs\_P-RF-CB; FJ562227\_LHBs\_P-  
RF-CB; EU939565\_LHBs\_P-RF-CB; GQ331048\_LHBs\_P-RF-AE; KM875422\_LHBs\_P-RF-CB;  
EU919167\_LHBs\_P-RF-CB

**298 Protein sequences are covered at 74 %:**

JQ707318\_LHBs\_P-A; DQ298165\_LHBs\_P-A; JQ707585\_LHBs\_P-A; JQ707586\_LHBs\_P-A;  
JQ707590\_LHBs\_P-A; JQ707592\_LHBs\_P-A; JQ707608\_LHBs\_P-A; JF439918\_LHBs\_P-A;  
JQ707595\_LHBs\_P-A; JF439935\_LHBs\_P-A; JQ707583\_LHBs\_P-A; KP995108\_LHBs\_P-A;  
JQ707601\_LHBs\_P-A; JF439919\_LHBs\_P-A; JF439990\_LHBs\_P-A; KF779211\_LHBs\_P-A;  
JQ707561\_LHBs\_P-A; JN604298\_LHBs\_P-A; GQ477497\_LHBs\_P-A; AY034878\_LHBs\_P-A;  
JN182328\_LHBs\_P-A; AB076678\_LHBs\_P-A; AY903452\_LHBs\_P-A; JN182327\_LHBs\_P-A;  
EU859952\_LHBs\_P-A; GQ331047\_LHBs\_P-A; KF922407\_LHBs\_P-A; KF922414\_LHBs\_P-A;  
KF922415\_LHBs\_P-A; KF922416\_LHBs\_P-A; KF922417\_LHBs\_P-A; KF922418\_LHBs\_P-A;  
KF922419\_LHBs\_P-A; KF922420\_LHBs\_P-A; KF922421\_LHBs\_P-A; KF476024\_LHBs\_P-A;  
AY233287\_LHBs\_P-A; KX357642\_LHBs\_P-A; KF170754\_LHBs\_P-A; GU815617\_LHBs\_P-B;  
GU815622\_LHBs\_P-B; FJ518812\_LHBs\_P-B; JN827419\_LHBs\_P-B; FJ562240\_LHBs\_P-B;  
FJ562219\_LHBs\_P-B; GU815709\_LHBs\_P-B; AB073830\_LHBs\_P-B; JX661480\_LHBs\_P-B;  
GQ377638\_LHBs\_P-B; GU815607\_LHBs\_P-B; GU815602\_LHBs\_P-B; GQ924648\_LHBs\_P-B;  
AB073837\_LHBs\_P-B; KX276801\_LHBs\_P-B; GU815713\_LHBs\_P-B; EU882002\_LHBs\_P-B;  
AB675676\_LHBs\_P-B; KJ803808\_LHBs\_P-B; KJ717820\_LHBs\_P-B; JN604134\_LHBs\_P-B;  
DQ993708\_LHBs\_P-B; GU815619\_LHBs\_P-B; GU815587\_LHBs\_P-B; FJ562222\_LHBs\_P-B;  
FJ386680\_LHBs\_P-B; EF134946\_LHBs\_P-B; AY518556\_LHBs\_P-B; AB287329\_LHBs\_P-B;  
AB073824\_LHBs\_P-B; KU963852\_LHBs\_P-B; KU963842\_LHBs\_P-B; KP406302\_LHBs\_P-B;  
KP406300\_LHBs\_P-B; KP406299\_LHBs\_P-B; KP406295\_LHBs\_P-B; KC774373\_LHBs\_P-B;  
KC510657\_LHBs\_P-B; KC510654\_LHBs\_P-B; JX429902\_LHBs\_P-B; JQ412092\_LHBs\_P-B;  
KU963955\_LHBs\_P-B; KU963948\_LHBs\_P-B; KC774402\_LHBs\_P-B; JX661483\_LHBs\_P-B;  
KU963987\_LHBs\_P-B; KU963951\_LHBs\_P-B; KM392083\_LHBs\_P-B; KJ173357\_LHBs\_P-B;  
KJ173356\_LHBs\_P-B; KC793053\_LHBs\_P-B; KC774419\_LHBs\_P-B; KC774408\_LHBs\_P-B;  
KC774406\_LHBs\_P-B; KC774403\_LHBs\_P-B; KC774399\_LHBs\_P-B; KC774374\_LHBs\_P-B;  
KC774366\_LHBs\_P-B; KC510652\_LHBs\_P-B; JX661481\_LHBs\_P-B; JN604122\_LHBs\_P-B;



KU964165\_LHBs\_P-B; KU964163\_LHBs\_P-B; KU964139\_LHBs\_P-B; KU964138\_LHBs\_P-B;  
KU963979\_LHBs\_P-B; KP406332\_LHBs\_P-B; KP148365\_LHBs\_P-B; KP148361\_LHBs\_P-B;  
KJ173388\_LHBs\_P-B; KJ173387\_LHBs\_P-B; KJ173362\_LHBs\_P-B; KJ173361\_LHBs\_P-B;  
KP406335\_LHBs\_P-B; KP406331\_LHBs\_P-B; KP148581\_LHBs\_P-B; KP148347\_LHBs\_P-B;  
KP148346\_LHBs\_P-B; KP148344\_LHBs\_P-B; KP148341\_LHBs\_P-B; KP148339\_LHBs\_P-B;  
KP148336\_LHBs\_P-B; KJ173390\_LHBs\_P-B; KJ173389\_LHBs\_P-B; KJ173355\_LHBs\_P-B;  
KC792906\_LHBs\_P-B; KU964082\_LHBs\_P-B; KU964080\_LHBs\_P-B; KJ173423\_LHBs\_P-B;  
KJ173422\_LHBs\_P-B; KC793115\_LHBs\_P-B; KJ803763\_LHBs\_P-B; KF053192\_LHBs\_P-B;  
KC792912\_LHBs\_P-B; KC792714\_LHBs\_P-B; GQ377624\_LHBs\_P-C; KX276979\_LHBs\_P-C;  
KU964171\_LHBs\_P-C; KT364752\_LHBs\_P-C; KJ173305\_LHBs\_P-C; KC774330\_LHBs\_P-C;  
KC774300\_LHBs\_P-C; KC774280\_LHBs\_P-C; KJ173332\_LHBs\_P-C; KJ173331\_LHBs\_P-C;  
KC774274\_LHBs\_P-C; JX661491\_LHBs\_P-C; KU964177\_LHBs\_P-C; KU964205\_LHBs\_P-C;  
KU964203\_LHBs\_P-C; KU964202\_LHBs\_P-C; KM229703\_LHBs\_P-C; KJ410521\_LHBs\_P-C;  
KC774351\_LHBs\_P-C; KC774321\_LHBs\_P-C; KC774298\_LHBs\_P-C; KC774282\_LHBs\_P-C;  
KC774278\_LHBs\_P-C; KC774270\_LHBs\_P-C; KC774218\_LHBs\_P-C; JX429916\_LHBs\_P-C;  
JX125370\_LHBs\_P-C; JX125366\_LHBs\_P-C; JX125371\_LHBs\_P-C; KR013802\_LHBs\_P-C;  
KR013793\_LHBs\_P-C; KC792708\_LHBs\_P-C; KU964043\_LHBs\_P-C; KR013774\_LHBs\_P-C;  
KJ173316\_LHBs\_P-C; KJ173293\_LHBs\_P-C; KC774336\_LHBs\_P-C; KC774262\_LHBs\_P-C;  
KC774261\_LHBs\_P-C; KC774196\_LHBs\_P-C; KJ173438\_LHBs\_P-C; KJ173437\_LHBs\_P-C;  
KJ173333\_LHBs\_P-C; KC774285\_LHBs\_P-C; KR013819\_LHBs\_P-C; FJ562310\_LHBs\_P-C;  
AB367431\_LHBs\_P-C; GQ377577\_LHBs\_P-C; AB670251\_LHBs\_P-C; AB362932\_LHBs\_P-C;  
AB222714\_LHBs\_P-C; AB670247\_LHBs\_P-C; AB640730\_LHBs\_P-C; AB471853\_LHBs\_P-C;  
AB471852\_LHBs\_P-C; AB471851\_LHBs\_P-C; AB367414\_LHBs\_P-C; FJ562252\_LHBs\_P-C;  
FJ386595\_LHBs\_P-C; GQ475310\_LHBs\_P-C; EU554540\_LHBs\_P-C; AP011098\_LHBs\_P-C;  
AB670310\_LHBs\_P-C; EU939595\_LHBs\_P-C; JN604215\_LHBs\_P-C; GQ475354\_LHBs\_P-C;  
GQ475344\_LHBs\_P-C; GQ475337\_LHBs\_P-C; GQ475331\_LHBs\_P-C; GQ475324\_LHBs\_P-C;  
GQ475323\_LHBs\_P-C; GQ475320\_LHBs\_P-C; GQ475319\_LHBs\_P-C; GQ475315\_LHBs\_P-C;  
GQ475313\_LHBs\_P-C; GQ475312\_LHBs\_P-C; GQ475311\_LHBs\_P-C; FJ562230\_LHBs\_P-C;  
AB697500\_LHBs\_P-C; AB670283\_LHBs\_P-C; AB670239\_LHBs\_P-C; AB670240\_LHBs\_P-C;  
EU306673\_LHBs\_P-C; EU939543\_LHBs\_P-C; FJ562307\_LHBs\_P-C; AB195947\_LHBs\_P-C;  
AB195952\_LHBs\_P-C; AB198081\_LHBs\_P-C; GQ377580\_LHBs\_P-C; FJ562280\_LHBs\_P-C;  
AB014399\_LHBs\_P-C; AB014374\_LHBs\_P-C; EU560438\_LHBs\_P-C; JX429903\_LHBs\_P-C;  
JN604246\_LHBs\_P-C; KC774279\_LHBs\_P-C; KC774252\_LHBs\_P-C; EU086837\_LHBs\_P-C;  
DQ922649\_LHBs\_P-C; FJ562244\_LHBs\_P-C; DQ922650\_LHBs\_P-C; KR013864\_LHBs\_P-C;  
GQ475350\_LHBs\_P-C; GQ475332\_LHBs\_P-C; GQ475329\_LHBs\_P-C; GQ475328\_LHBs\_P-C;  
GQ475317\_LHBs\_P-C; GQ475305\_LHBs\_P-C; GQ377597\_LHBs\_P-C; GQ377546\_LHBs\_P-C;  
FJ562235\_LHBs\_P-C; EU916222\_LHBs\_P-C; EU093917\_LHBs\_P-C; EU093908\_LHBs\_P-C;  
AB670305\_LHBs\_P-C; KR013804\_LHBs\_P-C; FJ562284\_LHBs\_P-C; FJ386652\_LHBs\_P-C;  
GQ377601\_LHBs\_P-C; AF411408\_LHBs\_P-C; AF411411\_LHBs\_P-C; EU796070\_LHBs\_P-C;  
EU796072\_LHBs\_P-C; FJ562251\_LHBs\_P-C; KU964364\_LHBs\_P-C; KP148337\_LHBs\_P-RF-BC;  
KC774414\_LHBs\_P-RF-BC; KC774323\_LHBs\_P-RF-CB; KU963869\_LHBs\_P-RF-CB; KU964317\_LHBs\_P-  
RF-CB; KU964315\_LHBs\_P-RF-CB; KU964314\_LHBs\_P-RF-CB; KU964313\_LHBs\_P-RF-CB;  
KU964312\_LHBs\_P-RF-CB; KU964311\_LHBs\_P-RF-CB; KU964310\_LHBs\_P-RF-CB; KU964309\_LHBs\_P-  
RF-CB; KU964308\_LHBs\_P-RF-CB; KU964307\_LHBs\_P-RF-CB; KU964305\_LHBs\_P-RF-CB;  
KU964304\_LHBs\_P-RF-CB; KU964303\_LHBs\_P-RF-CB; KU964010\_LHBs\_P-RF-CB; KU964009\_LHBs\_P-  
RF-CB; KU964008\_LHBs\_P-RF-CB; KU964007\_LHBs\_P-RF-CB; KU964006\_LHBs\_P-RF-CB;  
KU964005\_LHBs\_P-RF-CB; KC774183\_LHBs\_P-RF-CB; FJ715385\_LHBs\_P-RF-CB; EU939589\_LHBs\_P-  
RF-CB; KC774307\_LHBs\_P-RF-CB; KC774291\_LHBs\_P-RF-CB; EU916240\_LHBs\_P-RF-CB;  
KC774193\_LHBs\_P-RF-CB; JQ732168\_LHBs\_P-RF-CB; FJ562314\_LHBs\_P-RF-CB; EU871997\_LHBs\_P-



RF-CB; GQ377520\_LHBs\_P-RF-CB; KC774230\_LHBs\_P-RF-CB; FJ715414\_LHBs\_P-RF-CB;  
FJ715413\_LHBs\_P-RF-CB; FJ715412\_LHBs\_P-RF-CB; GQ377516\_LHBs\_P-RF-CB

**243 Protein sequences are covered at 73 %:**

JQ707589\_LHBs\_P-A; JF439912\_LHBs\_P-A; JF439925\_LHBs\_P-A; AJ344115\_LHBs\_P-A;  
JF439842\_LHBs\_P-A; JF439862\_LHBs\_P-A; JF439850\_LHBs\_P-A; JQ023663\_LHBs\_P-A;  
JN182330\_LHBs\_P-A; KF214662\_LHBs\_P-A; KJ010776\_LHBs\_P-A; KJ010778\_LHBs\_P-A;  
AY233285\_LHBs\_P-A; FJ692559\_LHBs\_P-A; KJ854691\_LHBs\_P-A; KX357647\_LHBs\_P-A;  
KX357649\_LHBs\_P-A; GU815706\_LHBs\_P-B; GU815701\_LHBs\_P-B; GU815702\_LHBs\_P-B;  
EU306711\_LHBs\_P-B; AY766463\_LHBs\_P-B; GU815735\_LHBs\_P-B; AB195934\_LHBs\_P-B;  
AB195935\_LHBs\_P-B; GU815639\_LHBs\_P-B; GU815574\_LHBs\_P-B; GU815577\_LHBs\_P-B;  
FJ386636\_LHBs\_P-B; GU815771\_LHBs\_P-B; GU815769\_LHBs\_P-B; GU815768\_LHBs\_P-B;  
GU815767\_LHBs\_P-B; GU815766\_LHBs\_P-B; GU815765\_LHBs\_P-B; GU815762\_LHBs\_P-B;  
GU815760\_LHBs\_P-B; GU815759\_LHBs\_P-B; GU815757\_LHBs\_P-B; GU815755\_LHBs\_P-B;  
GU815754\_LHBs\_P-B; GU815753\_LHBs\_P-B; GU815751\_LHBs\_P-B; GU815750\_LHBs\_P-B;  
GU815746\_LHBs\_P-B; GU815745\_LHBs\_P-B; GU815744\_LHBs\_P-B; GU815738\_LHBs\_P-B;  
GU815736\_LHBs\_P-B; GU815728\_LHBs\_P-B; GU815726\_LHBs\_P-B; GU815723\_LHBs\_P-B;  
GU815715\_LHBs\_P-B; FJ562254\_LHBs\_P-B; FJ562246\_LHBs\_P-B; KC774398\_LHBs\_P-B;  
JN604143\_LHBs\_P-B; EU939663\_LHBs\_P-B; KC510656\_LHBs\_P-B; GU815684\_LHBs\_P-B;  
KU963854\_LHBs\_P-B; KP406301\_LHBs\_P-B; KC774372\_LHBs\_P-B; JX661471\_LHBs\_P-B;  
KU963827\_LHBs\_P-B; KU963826\_LHBs\_P-B; KU963825\_LHBs\_P-B; KU963824\_LHBs\_P-B;  
KU963823\_LHBs\_P-B; KU963822\_LHBs\_P-B; KU963821\_LHBs\_P-B; KU963820\_LHBs\_P-B;  
KU963819\_LHBs\_P-B; KU963818\_LHBs\_P-B; KU963817\_LHBs\_P-B; KU963814\_LHBs\_P-B;  
KP148348\_LHBs\_P-B; KC793084\_LHBs\_P-B; KC774416\_LHBs\_P-B; KJ173398\_LHBs\_P-B;  
KJ173397\_LHBs\_P-B; KU963986\_LHBs\_P-B; KU963978\_LHBs\_P-B; KU963977\_LHBs\_P-B;  
KU963976\_LHBs\_P-B; KU963833\_LHBs\_P-B; KU964103\_LHBs\_P-B; KP148338\_LHBs\_P-B;  
KJ173402\_LHBs\_P-B; KJ173401\_LHBs\_P-B; KJ410502\_LHBs\_P-B; KC792971\_LHBs\_P-B;  
KC792902\_LHBs\_P-C; JX560520\_LHBs\_P-C; KC792775\_LHBs\_P-C; KC774191\_LHBs\_P-C;  
EF536065\_LHBs\_P-C; KT284754\_LHBs\_P-C; KJ598681\_LHBs\_P-C; KC792792\_LHBs\_P-C;  
JQ341658\_LHBs\_P-C; KU964039\_LHBs\_P-C; KM999991\_LHBs\_P-C; KJ410508\_LHBs\_P-C;  
KJ173444\_LHBs\_P-C; KJ173443\_LHBs\_P-C; KC792961\_LHBs\_P-C; KC774205\_LHBs\_P-C;  
KC774283\_LHBs\_P-C; KR013832\_LHBs\_P-C; KR013830\_LHBs\_P-C; KR013828\_LHBs\_P-C;  
KR013810\_LHBs\_P-C; KR013807\_LHBs\_P-C; KP027477\_LHBs\_P-C; KJ598754\_LHBs\_P-C;  
KJ598748\_LHBs\_P-C; KJ598747\_LHBs\_P-C; KJ598745\_LHBs\_P-C; KJ598742\_LHBs\_P-C;  
KJ598741\_LHBs\_P-C; KJ598702\_LHBs\_P-C; KJ598698\_LHBs\_P-C; KJ598693\_LHBs\_P-C;  
KJ598689\_LHBs\_P-C; KJ173392\_LHBs\_P-C; KJ173391\_LHBs\_P-C; KJ173294\_LHBs\_P-C;  
KC774318\_LHBs\_P-C; KC774206\_LHBs\_P-C; KC774190\_LHBs\_P-C; JX429912\_LHBs\_P-C;  
JX429906\_LHBs\_P-C; JX026884\_LHBs\_P-C; KM875429\_LHBs\_P-C; FJ518813\_LHBs\_P-C;  
FJ386644\_LHBs\_P-C; AB367403\_LHBs\_P-C; FJ715352\_LHBs\_P-C; FJ715365\_LHBs\_P-C;  
EU939587\_LHBs\_P-C; EU939600\_LHBs\_P-C; KC774299\_LHBs\_P-C; GQ475348\_LHBs\_P-C;  
EU939570\_LHBs\_P-C; AB367418\_LHBs\_P-C; JX661489\_LHBs\_P-C; FJ032346\_LHBs\_P-C;  
AB670276\_LHBs\_P-C; FJ562285\_LHBs\_P-C; GQ377616\_LHBs\_P-C; EU939611\_LHBs\_P-C;  
KU964193\_LHBs\_P-C; KU963885\_LHBs\_P-C; KU963882\_LHBs\_P-C; KU963877\_LHBs\_P-C;  
KU963875\_LHBs\_P-C; KU963874\_LHBs\_P-C; KU963871\_LHBs\_P-C; KJ173284\_LHBs\_P-C;  
KJ173283\_LHBs\_P-C; KC774361\_LHBs\_P-C; KC774339\_LHBs\_P-C; KC774247\_LHBs\_P-C;  
KC774233\_LHBs\_P-C; JX661488\_LHBs\_P-C; JN400089\_LHBs\_P-C; JN400088\_LHBs\_P-C;  
JN400087\_LHBs\_P-C; GQ377598\_LHBs\_P-C; GQ377576\_LHBs\_P-C; GQ377563\_LHBs\_P-C;  
FJ562332\_LHBs\_P-C; FJ386575\_LHBs\_P-C; DQ536410\_LHBs\_P-C; AY641558\_LHBs\_P-C;  
AB670256\_LHBs\_P-C; FJ787455\_LHBs\_P-C; FJ787442\_LHBs\_P-C; EU075336\_LHBs\_P-C;  
EU916223\_LHBs\_P-C; EU916224\_LHBs\_P-C; GQ377615\_LHBs\_P-C; AB195936\_LHBs\_P-C;





AB026811\_LHBs\_P-C; AB026812\_LHBs\_P-C; AB026814\_LHBs\_P-C; AB471848\_LHBs\_P-C; AB471849\_LHBs\_P-C; AB471850\_LHBs\_P-C; EU554539\_LHBs\_P-C; EU306675\_LHBs\_P-C; GQ377593\_LHBs\_P-C; AB367411\_LHBs\_P-C; KJ173432\_LHBs\_P-C; KJ173431\_LHBs\_P-C; KC774244\_LHBs\_P-C; KC774203\_LHBs\_P-C; KJ598687\_LHBs\_P-C; HM750140\_LHBs\_P-C; HM750134\_LHBs\_P-C; KR013831\_LHBs\_P-C; KC774210\_LHBs\_P-C; JX504536\_LHBs\_P-C; KC774180\_LHBs\_P-C; JX026878\_LHBs\_P-C; FJ562293\_LHBs\_P-C; EU939604\_LHBs\_P-C; EU093912\_LHBs\_P-C; DQ980547\_LHBs\_P-C; FJ562242\_LHBs\_P-C; GQ377640\_LHBs\_P-C; GQ377574\_LHBs\_P-C; GQ377521\_LHBs\_P-C; GQ377515\_LHBs\_P-C; FJ715398\_LHBs\_P-C; FJ715367\_LHBs\_P-C; FJ715366\_LHBs\_P-C; FJ562318\_LHBs\_P-C; FJ562275\_LHBs\_P-C; FJ562274\_LHBs\_P-C; FJ562233\_LHBs\_P-C; FJ386678\_LHBs\_P-C; FJ386576\_LHBs\_P-C; FJ032361\_LHBs\_P-C; EU916210\_LHBs\_P-C; EU075335\_LHBs\_P-C; AY167091\_LHBs\_P-C; AF458664\_LHBs\_P-C; V00867\_LHBs\_P-C; EU939629\_LHBs\_P-RF-BC; KJ410497\_LHBs\_P-RF-BC; HQ700515\_LHBs\_P-RF-CB; KJ717815\_LHBs\_P-RF-CB; KJ803803\_LHBs\_P-RF-CB; HQ700508\_LHBs\_P-RF-CB; FJ562305\_LHBs\_P-RF-CB; AF461361\_LHBs\_P-RF-CB; JN400086\_LHBs\_P-RF-CB; EF494376\_LHBs\_P-RF-CA; KU964351\_LHBs\_P-RF-CB; KR013816\_LHBs\_P-RF-CB; JX661487\_LHBs\_P-RF-CB

**183 Protein sequences are covered at 72 %:**

AF537372\_LHBs\_P-A; JF439920\_LHBs\_P-A; JF439917\_LHBs\_P-A; DQ298162\_LHBs\_P-A; AB222707\_LHBs\_P-A; JF439975\_LHBs\_P-A; AB241115\_LHBs\_P-A; AY934772\_LHBs\_P-A; AY161139\_LHBs\_P-A; AY373429\_LHBs\_P-A; HM363612\_LHBs\_P-A; GU563547\_LHBs\_P-A; KF922409\_LHBs\_P-A; AB116086\_LHBs\_P-A; KF476023\_LHBs\_P-A; JN604163\_LHBs\_P-A; KJ010777\_LHBs\_P-A; KM606737\_LHBs\_P-A; KR905429\_LHBs\_P-A; KR905427\_LHBs\_P-A; AB073828\_LHBs\_P-B; DQ993697\_LHBs\_P-B; FJ562322\_LHBs\_P-B; EU439022\_LHBs\_P-B; DQ993699\_LHBs\_P-B; GU815752\_LHBs\_P-B; GU815743\_LHBs\_P-B; EU306699\_LHBs\_P-B; AY167101\_LHBs\_P-B; DQ993710\_LHBs\_P-B; GU815653\_LHBs\_P-B; FJ386681\_LHBs\_P-B; EU595031\_LHBs\_P-B; FJ386654\_LHBs\_P-B; JN604311\_LHBs\_P-B; GU815756\_LHBs\_P-B; GU815657\_LHBs\_P-B; GU815626\_LHBs\_P-B; GQ924607\_LHBs\_P-B; GQ377612\_LHBs\_P-B; GQ377519\_LHBs\_P-B; JX429911\_LHBs\_P-B; JX429910\_LHBs\_P-B; GU815608\_LHBs\_P-B; JQ801516\_LHBs\_P-B; GU815670\_LHBs\_P-B; GQ924627\_LHBs\_P-B; DQ448625\_LHBs\_P-B; AF121246\_LHBs\_P-B; AF121245\_LHBs\_P-B; AF121243\_LHBs\_P-B; JX661475\_LHBs\_P-B; JN604124\_LHBs\_P-B; JN604187\_LHBs\_P-B; KU963953\_LHBs\_P-B; KC792944\_LHBs\_P-B; JQ341578\_LHBs\_P-B; KP406311\_LHBs\_P-B; KC792681\_LHBs\_P-B; KU963980\_LHBs\_P-B; KP148582\_LHBs\_P-B; KJ410507\_LHBs\_P-B; KP406329\_LHBs\_P-B; KP406328\_LHBs\_P-B; KP406326\_LHBs\_P-B; KP406325\_LHBs\_P-B; KP406324\_LHBs\_P-B; KP406323\_LHBs\_P-B; KP406322\_LHBs\_P-B; KP406321\_LHBs\_P-B; KP406320\_LHBs\_P-B; KP406319\_LHBs\_P-B; KP406318\_LHBs\_P-B; KP148331\_LHBs\_P-B; KP148324\_LHBs\_P-B; KM392084\_LHBs\_P-B; KJ410516\_LHBs\_P-B; KJ173366\_LHBs\_P-B; KC793196\_LHBs\_P-B; KP406264\_LHBs\_P-B; KC792985\_LHBs\_P-B; KC792709\_LHBs\_P-B; KU964081\_LHBs\_P-B; KU964079\_LHBs\_P-B; KU963968\_LHBs\_P-B; KC792702\_LHBs\_P-B; GQ259588\_LHBs\_P-C; KU964213\_LHBs\_P-C; KU964212\_LHBs\_P-C; KU964211\_LHBs\_P-C; KU964210\_LHBs\_P-C; KU964209\_LHBs\_P-C; KU964208\_LHBs\_P-C; KU964207\_LHBs\_P-C; KU964206\_LHBs\_P-C; KU964204\_LHBs\_P-C; KU964201\_LHBs\_P-C; KR013776\_LHBs\_P-C; KC774225\_LHBs\_P-C; KR013795\_LHBs\_P-C; KC774288\_LHBs\_P-C; KR013877\_LHBs\_P-C; KR013875\_LHBs\_P-C; KF485390\_LHBs\_P-C; KJ173317\_LHBs\_P-C; KJ173315\_LHBs\_P-C; KC774311\_LHBs\_P-C; KR014012\_LHBs\_P-C; KR013829\_LHBs\_P-C; KR013811\_LHBs\_P-C; KR013768\_LHBs\_P-C; KR013761\_LHBs\_P-C; KJ598752\_LHBs\_P-C; KJ598751\_LHBs\_P-C; KJ598746\_LHBs\_P-C; KJ598743\_LHBs\_P-C; KC792999\_LHBs\_P-C; KJ803815\_LHBs\_P-C; KJ803811\_LHBs\_P-C; KJ717828\_LHBs\_P-C; KJ717823\_LHBs\_P-C; GQ924615\_LHBs\_P-C; JQ412089\_LHBs\_P-C; KR013817\_LHBs\_P-C; KJ803761\_LHBs\_P-C; KJ803759\_LHBs\_P-C; KF053169\_LHBs\_P-C; KF053167\_LHBs\_P-C;



KC792927\_LHBs\_P-C; AB670274\_LHBs\_P-C; FJ899772\_LHBs\_P-C; FJ562248\_LHBs\_P-C;  
GQ377586\_LHBs\_P-C; GQ358158\_LHBs\_C-C; KJ173436\_LHBs\_P-C; KJ173435\_LHBs\_P-C;  
FJ562288\_LHBs\_P-C; D23684\_LHBs\_P-C; AB670307\_LHBs\_P-C; AB670263\_LHBs\_P-C;  
FJ562256\_LHBs\_P-C; KC774357\_LHBs\_P-C; KC774219\_LHBs\_P-C; JQ341636\_LHBs\_P-C;  
GQ475349\_LHBs\_P-C; D50518\_LHBs\_P-C; D50517\_LHBs\_P-C; AB670288\_LHBs\_P-C;  
FJ787443\_LHBs\_P-C; FJ562243\_LHBs\_P-C; AB195937\_LHBs\_P-C; AB195938\_LHBs\_P-C;  
AB042284\_LHBs\_P-C; EU570068\_LHBs\_P-C; FJ787445\_LHBs\_P-C; DQ975272\_LHBs\_P-C;  
FJ562239\_LHBs\_P-C; HM750141\_LHBs\_P-C; KJ173334\_LHBs\_P-C; FJ562273\_LHBs\_P-C;  
EU093896\_LHBs\_P-C; AB367427\_LHBs\_P-C; EU916234\_LHBs\_P-C; EU093915\_LHBs\_P-C;  
EU939592\_LHBs\_P-C; EU939538\_LHBs\_P-C; EU916233\_LHBs\_P-C; AB111124\_LHBs\_P-C;  
AB111125\_LHBs\_P-C; AB246344\_LHBs\_P-C; EU882005\_LHBs\_P-C; EU871979\_LHBs\_P-C;  
GQ377623\_LHBs\_P-C; HQ700499\_LHBs\_P-RF-CB; HQ700498\_LHBs\_P-RF-CB; AF233236\_LHBs\_P-RF-  
CB; GQ377614\_LHBs\_P-RF-CB; AB241109\_LHBs\_P-RF-CB; KU695745\_LHBs\_P-RF-CB;  
KR013806\_LHBs\_P-RF-CB; FJ787480\_LHBs\_P-RF-CB; HF571060\_LHBs\_P-RF-AE; EU939606\_LHBs\_P-  
RF-CB

**202 Protein sequences are covered at 71 %:**

JN604309\_LHBs\_P-A; JF439911\_LHBs\_P-A; JF439821\_LHBs\_P-A; JF439861\_LHBs\_P-A;  
AB116089\_LHBs\_P-A; FJ692609\_LHBs\_P-A; KT347087\_LHBs\_P-A; JN604241\_LHBs\_P-A;  
HM535205\_LHBs\_P-A; EF473973\_LHBs\_P-B; GQ377582\_LHBs\_P-B; FJ562296\_LHBs\_P-B;  
EU306704\_LHBs\_P-B; EU939676\_LHBs\_P-B; FJ562316\_LHBs\_P-B; EU306678\_LHBs\_P-B;  
EU306681\_LHBs\_P-B; FJ562289\_LHBs\_P-B; EU522067\_LHBs\_P-B; GU815734\_LHBs\_P-B;  
FJ386634\_LHBs\_P-B; AB246342\_LHBs\_P-B; AB010289\_LHBs\_P-B; AY596110\_LHBs\_P-B;  
AY217362\_LHBs\_P-B; AY167097\_LHBs\_P-B; AB205120\_LHBs\_P-B; AB073846\_LHBs\_P-B;  
JX504543\_LHBs\_P-B; GU815581\_LHBs\_P-B; KC774365\_LHBs\_P-B; KC774395\_LHBs\_P-B;  
FJ386676\_LHBs\_P-B; EU305548\_LHBs\_P-B; EF134945\_LHBs\_P-B; AB073827\_LHBs\_P-B;  
KC792687\_LHBs\_P-B; KC774407\_LHBs\_P-B; KC774401\_LHBs\_P-B; KC774400\_LHBs\_P-B;  
KC774396\_LHBs\_P-B; KC774380\_LHBs\_P-B; JQ341609\_LHBs\_P-B; KP406294\_LHBs\_P-B;  
KP406284\_LHBs\_P-B; KC774409\_LHBs\_P-B; JQ341555\_LHBs\_P-B; KC774367\_LHBs\_P-B;  
JQ040125\_LHBs\_P-B; KC793020\_LHBs\_P-B; JX661470\_LHBs\_P-B; JQ341579\_LHBs\_P-B;  
KU964168\_LHBs\_P-B; KU964157\_LHBs\_P-B; KU964156\_LHBs\_P-B; KU964143\_LHBs\_P-B;  
KP406282\_LHBs\_P-B; KP406273\_LHBs\_P-B; KU964149\_LHBs\_P-B; KP406293\_LHBs\_P-B;  
KP406292\_LHBs\_P-B; KC792809\_LHBs\_P-B; KU964136\_LHBs\_P-B; KP406279\_LHBs\_P-B;  
KM875416\_LHBs\_P-B; KJ803764\_LHBs\_P-B; KF053171\_LHBs\_P-B; KC793165\_LHBs\_P-B;  
KC793082\_LHBs\_P-B; KC792957\_LHBs\_P-B; GQ377572\_LHBs\_P-C; FJ562282\_LHBs\_P-C;  
KT364751\_LHBs\_P-C; KC774204\_LHBs\_P-C; FJ562323\_LHBs\_P-C; KR013876\_LHBs\_P-C;  
KC774346\_LHBs\_P-C; KC875262\_LHBs\_P-C; KR013814\_LHBs\_P-C; KR013801\_LHBs\_P-C;  
KJ173446\_LHBs\_P-C; KJ173314\_LHBs\_P-C; KJ173313\_LHBs\_P-C; KC774354\_LHBs\_P-C;  
KC774268\_LHBs\_P-C; KR013834\_LHBs\_P-C; KJ598719\_LHBs\_P-C; KJ598714\_LHBs\_P-C;  
KR013833\_LHBs\_P-C; KT284756\_LHBs\_P-C; KR013812\_LHBs\_P-C; KJ173308\_LHBs\_P-C;  
KJ173307\_LHBs\_P-C; KJ173304\_LHBs\_P-C; KF779242\_LHBs\_P-C; KC792679\_LHBs\_P-C;  
KC774352\_LHBs\_P-C; KP148560\_LHBs\_P-C; KP148546\_LHBs\_P-C; KP148479\_LHBs\_P-C;  
EF688062\_LHBs\_P-C; KP148476\_LHBs\_P-C; KR013899\_LHBs\_P-C; KM875406\_LHBs\_P-C;  
KC774221\_LHBs\_P-C; JN604256\_LHBs\_P-C; JN604182\_LHBs\_P-C; HM011497\_LHBs\_P-C;  
KT347089\_LHBs\_P-C; FJ715379\_LHBs\_P-C; FJ386623\_LHBs\_P-C; AB670279\_LHBs\_P-C;  
FJ715359\_LHBs\_P-C; FJ386661\_LHBs\_P-C; GQ377631\_LHBs\_P-C; AF461358\_LHBs\_P-C;  
AF461359\_LHBs\_P-C; AB485810\_LHBs\_P-C; AB367394\_LHBs\_P-C; AB367432\_LHBs\_P-C;  
KJ173321\_LHBs\_P-C; JF828937\_LHBs\_P-C; GQ377529\_LHBs\_P-C; GQ377540\_LHBs\_P-C;  
FJ386671\_LHBs\_P-C; EU306720\_LHBs\_P-C; EU306719\_LHBs\_P-C; AY206384\_LHBs\_P-C;  
AB670291\_LHBs\_P-C; AB670282\_LHBs\_P-C; KU963884\_LHBs\_P-C; KU963881\_LHBs\_P-C;



KU963879\_LHBs\_P-C; KU963876\_LHBs\_P-C; FJ562279\_LHBs\_P-C; EU562217\_LHBs\_P-C; EU562215\_LHBs\_P-C; AB670292\_LHBs\_P-C; EU306674\_LHBs\_P-C; AB111122\_LHBs\_P-C; EU939619\_LHBs\_P-C; GQ377571\_LHBs\_P-C; AB033550\_LHBs\_P-C; FJ562281\_LHBs\_P-C; EU916237\_LHBs\_P-C; FJ386579\_LHBs\_P-C; AB195953\_LHBs\_P-C; AB195954\_LHBs\_P-C; HM750131\_LHBs\_P-C; FJ562304\_LHBs\_P-C; KC792672\_LHBs\_P-C; KC774356\_LHBs\_P-C; KC774334\_LHBs\_P-C; KJ173395\_LHBs\_P-C; EU939655\_LHBs\_P-C; EU939656\_LHBs\_P-C; EU086847\_LHBs\_P-C; EU086843\_LHBs\_P-C; EU086844\_LHBs\_P-C; EU086846\_LHBs\_P-C; EU093914\_LHBs\_P-C; FJ386577\_LHBs\_P-C; JQ040166\_LHBs\_P-C; AY066028\_LHBs\_P-C; AY247032\_LHBs\_P-C; KC792713\_LHBs\_P-C; KC792739\_LHBs\_P-C; EU086841\_LHBs\_P-C; GQ377595\_LHBs\_P-RF-BC; EU919166\_LHBs\_P-RF-CB; EU871981\_LHBs\_P-RF-CB; EU871983\_LHBs\_P-RF-CB; EU871986\_LHBs\_P-RF-CB; EU871991\_LHBs\_P-RF-CB; EU871984\_LHBs\_P-RF-CB; EU871985\_LHBs\_P-RF-CB; EU871987\_LHBs\_P-RF-CB; EU871989\_LHBs\_P-RF-CB; EU871992\_LHBs\_P-RF-CB; EU871993\_LHBs\_P-RF-CB; EU871994\_LHBs\_P-RF-CB; EU871995\_LHBs\_P-RF-CB; EU871996\_LHBs\_P-RF-CB; EU871988\_LHBs\_P-RF-CB; JF828935\_LHBs\_P-RF-CB; EU939551\_LHBs\_P-RF-CB; JF828938\_LHBs\_P-RF-CB; JF828934\_LHBs\_P-RF-CB; JF828933\_LHBs\_P-RF-CB; KU964316\_LHBs\_P-RF-CB; AB367393\_LHBs\_P-RF-CB; GQ924618\_LHBs\_P-RF-CB; KU695743\_LHBs\_P-RF-CB; KU695741\_LHBs\_P-RF-CB; KC774344\_LHBs\_P-RF-CB; KU963862\_LHBs\_P-RF-CB; KJ173322\_LHBs\_P-RF-CB; KJ173320\_LHBs\_P-RF-CB; KC774222\_LHBs\_P-RF-CB; JF436922\_LHBs\_P-RF-CB; FJ715384\_LHBs\_P-RF-CB; GQ161753\_LHBs\_P-RF-AE

**182 Protein sequences are covered at 70 %:**

JQ707599\_LHBs\_P-A; JQ707576\_LHBs\_P-A; DQ298161\_LHBs\_P-A; JF439849\_LHBs\_P-A; HM011485\_LHBs\_P-A; EF103278\_LHBs\_P-A; AB194952\_LHBs\_P-A; JN182334\_LHBs\_P-A; AB453986\_LHBs\_P-A; AB453989\_LHBs\_P-A; JX154579\_LHBs\_P-A; KF476027\_LHBs\_P-A; KF476026\_LHBs\_P-A; KF922429\_LHBs\_P-A; KF922430\_LHBs\_P-A; KF476020\_LHBs\_P-A; AP011089\_LHBs\_P-B; AY596104\_LHBs\_P-B; GU815620\_LHBs\_P-B; GU815621\_LHBs\_P-B; AY800389\_LHBs\_P-B; GU815710\_LHBs\_P-B; GU815707\_LHBs\_P-B; GQ475340\_LHBs\_P-B; DQ463799\_LHBs\_P-B; AB471854\_LHBs\_P-B; EU939638\_LHBs\_P-B; FJ562303\_LHBs\_P-B; FJ386666\_LHBs\_P-B; D00329\_LHBs\_P-B; AY217360\_LHBs\_P-B; JX429901\_LHBs\_P-B; GU815640\_LHBs\_P-B; GQ377525\_LHBs\_P-B; AP011084\_LHBs\_P-B; FJ562257\_LHBs\_P-B; AY596109\_LHBs\_P-B; KP659235\_LHBs\_P-B; AY596105\_LHBs\_P-B; KP406303\_LHBs\_P-B; KP406290\_LHBs\_P-B; KP406288\_LHBs\_P-B; JQ341600\_LHBs\_P-B; KP406297\_LHBs\_P-B; KJ173403\_LHBs\_P-B; KC774413\_LHBs\_P-B; KP406314\_LHBs\_P-B; KP406312\_LHBs\_P-B; KP406305\_LHBs\_P-B; KP406296\_LHBs\_P-B; KC792754\_LHBs\_P-B; KC774371\_LHBs\_P-B; KP036970\_LHBs\_P-B; KC792750\_LHBs\_P-B; JQ341573\_LHBs\_P-B; KU964245\_LHBs\_P-B; KU963967\_LHBs\_P-B; KP406334\_LHBs\_P-B; KP406330\_LHBs\_P-B; KM213036\_LHBs\_P-B; KJ173364\_LHBs\_P-B; KJ173363\_LHBs\_P-B; KU964154\_LHBs\_P-B; KP406333\_LHBs\_P-B; KP148579\_LHBs\_P-B; KP148345\_LHBs\_P-B; KP148340\_LHBs\_P-B; KM875420\_LHBs\_P-B; KC792913\_LHBs\_P-B; KP148322\_LHBs\_P-B; KC793007\_LHBs\_P-B; EU916225\_LHBs\_P-C; KC774217\_LHBs\_P-C; FJ899788\_LHBs\_P-C; KR013846\_LHBs\_P-C; KC774253\_LHBs\_P-C; JX560519\_LHBs\_P-C; KR013796\_LHBs\_P-C; KR013792\_LHBs\_P-C; KJ598744\_LHBs\_P-C; KJ173282\_LHBs\_P-C; KJ173281\_LHBs\_P-C; KC774329\_LHBs\_P-C; KC774209\_LHBs\_P-C; JN604147\_LHBs\_P-C; KJ803813\_LHBs\_P-C; KJ171826\_LHBs\_P-C; EF384200\_LHBs\_P-C; FJ562300\_LHBs\_P-C; KC315399\_LHBs\_P-C; KJ173323\_LHBs\_P-C; FJ715360\_LHBs\_P-C; GQ372968\_LHBs\_P-C; FJ032350\_LHBs\_P-C; AB367407\_LHBs\_P-C; AY206382\_LHBs\_P-C; AB014377\_LHBs\_P-C; AB485808\_LHBs\_P-C; AB202071\_LHBs\_P-C; AB205124\_LHBs\_P-C; GQ358157\_LHBs\_P-C; FJ787465\_LHBs\_P-C; FJ787464\_LHBs\_P-C; AF286594\_LHBs\_P-C; AB670295\_LHBs\_P-C; JN604281\_LHBs\_P-C; JN604131\_LHBs\_P-C; JF828922\_LHBs\_P-C; GQ872211\_LHBs\_P-C; GQ475339\_LHBs\_P-C; GQ377578\_LHBs\_P-C; EU306728\_LHBs\_P-C; EU306726\_LHBs\_P-C; AB900115\_LHBs\_P-C; KU963873\_LHBs\_P-C; KU963872\_LHBs\_P-C;



KR013850\_LHBs\_P-C; KC774265\_LHBs\_P-C; JQ341662\_LHBs\_P-C; GQ872210\_LHBs\_P-C;  
GQ377524\_LHBs\_P-C; AB670287\_LHBs\_P-C; FJ562225\_LHBs\_P-C; FJ715389\_LHBs\_P-C;  
AB367397\_LHBs\_P-C; EU589336\_LHBs\_P-C; AB670302\_LHBs\_P-C; AB670270\_LHBs\_P-C;  
FJ562306\_LHBs\_P-C; FJ386597\_LHBs\_P-C; AB299858\_LHBs\_P-C; AB426467\_LHBs\_P-C;  
AB198076\_LHBs\_P-C; AB670272\_LHBs\_P-C; AB026815\_LHBs\_P-C; AB033553\_LHBs\_P-C;  
AB367423\_LHBs\_P-C; GQ475325\_LHBs\_P-C; AY206392\_LHBs\_P-C; JX026880\_LHBs\_P-C;  
KR013791\_LHBs\_P-C; HM750139\_LHBs\_P-C; AB493844\_LHBs\_P-C; EU579443\_LHBs\_P-C;  
AB113879\_LHBs\_P-C; EU939607\_LHBs\_P-C; GQ377621\_LHBs\_P-C; EU939545\_LHBs\_P-C;  
DQ478900\_LHBs\_P-C; GQ377517\_LHBs\_P-C; GQ377642\_LHBs\_P-C; GQ377585\_LHBs\_P-C;  
GQ377575\_LHBs\_P-C; GQ377554\_LHBs\_P-C; GQ377545\_LHBs\_P-C; FJ715371\_LHBs\_P-C;  
FJ032331\_LHBs\_P-C; AY641560\_LHBs\_P-C; AB198082\_LHBs\_P-C; AB300362\_LHBs\_P-C;  
KC792793\_LHBs\_P-C; D00630\_LHBs\_P-C; AB014381\_LHBs\_P-C; KX276968\_LHBs\_P-C;  
X04615\_LHBs\_P-C; GQ377592\_LHBs\_P-RF-CB; HQ700505\_LHBs\_P-RF-CB; HQ700542\_LHBs\_P-RF-CB;  
JF828936\_LHBs\_P-RF-CB; AB493842\_LHBs\_P-RF-CB; EU916232\_LHBs\_P-RF-CB; FJ562267\_LHBs\_P-RF-  
CB; FJ386649\_LHBs\_P-RF-CB; EU871990\_LHBs\_P-RF-CB; AB493847\_LHBs\_P-RF-CB;  
AB033557\_LHBs\_P-RF-CB; FJ715411\_LHBs\_P-RF-CB; KJ173279\_LHBs\_P-RF-CB; FJ787446\_LHBs\_P-RF-  
CB; FJ715387\_LHBs\_P-RF-CB; FJ386585\_LHBs\_P-RF-CB; AY040627\_LHBs\_P-RF-CB

**168 Protein sequences are covered at 69 %:**

JQ707580\_LHBs\_P-A; JF439864\_LHBs\_P-A; JF439868\_LHBs\_P-A; AB194950\_LHBs\_P-A;  
FJ692554\_LHBs\_P-A; AY233281\_LHBs\_P-A; KF476018\_LHBs\_P-A; KR905425\_LHBs\_P-A;  
FJ692561\_LHBs\_P-A; KR905426\_LHBs\_P-A; M54923\_LHBs\_P-B; KP341009\_LHBs\_P-B;  
AP011085\_LHBs\_P-B; EF473971\_LHBs\_P-B; AY220698\_LHBs\_P-B; EU939666\_LHBs\_P-B;  
EU939559\_LHBs\_P-B; JN792896\_LHBs\_P-B; DQ463788\_LHBs\_P-B; AB073848\_LHBs\_P-B;  
AB073836\_LHBs\_P-B; AY033073\_LHBs\_P-B; JX026881\_LHBs\_P-B; DQ993709\_LHBs\_P-B;  
KC774405\_LHBs\_P-B; GU815749\_LHBs\_P-B; AF100309\_LHBs\_P-B; AY596102\_LHBs\_P-B;  
KC774404\_LHBs\_P-B; KP659237\_LHBs\_P-B; AF279464\_LHBs\_P-B; KC793070\_LHBs\_P-B;  
KC792827\_LHBs\_P-B; JX661479\_LHBs\_P-B; JQ341570\_LHBs\_P-B; KP659247\_LHBs\_P-B;  
KP341011\_LHBs\_P-B; KX276809\_LHBs\_P-B; KP406262\_LHBs\_P-B; KC774375\_LHBs\_P-B;  
KC510653\_LHBs\_P-B; KU964120\_LHBs\_P-B; KP406272\_LHBs\_P-B; KP148317\_LHBs\_P-B;  
KC792797\_LHBs\_P-B; KR232337\_LHBs\_P-B; KC792849\_LHBs\_P-B; KJ173376\_LHBs\_P-B;  
KC793181\_LHBs\_P-B; KC793027\_LHBs\_P-B; KU964131\_LHBs\_P-B; KC793091\_LHBs\_P-B;  
AY057947\_LHBs\_P-C; KR013874\_LHBs\_P-C; KC875261\_LHBs\_P-C; KR819180\_LHBs\_P-C;  
KM359441\_LHBs\_P-C; JX504542\_LHBs\_P-C; KC793050\_LHBs\_P-C; KR013872\_LHBs\_P-C;  
KU964215\_LHBs\_P-C; KR013765\_LHBs\_P-C; KJ598710\_LHBs\_P-C; KC774355\_LHBs\_P-C;  
KP784761\_LHBs\_P-C; KJ598749\_LHBs\_P-C; KJ598740\_LHBs\_P-C; KM875405\_LHBs\_P-C;  
AB246346\_LHBs\_P-C; JN827425\_LHBs\_P-C; KR013905\_LHBs\_P-C; KC774236\_LHBs\_P-C;  
HQ700522\_LHBs\_P-C; HQ700543\_LHBs\_P-C; EU939597\_LHBs\_P-C; FJ715377\_LHBs\_P-C;  
EU939657\_LHBs\_P-C; FJ715343\_LHBs\_P-C; EU939618\_LHBs\_P-C; AB014360\_LHBs\_P-C;  
AB367422\_LHBs\_P-C; GQ377557\_LHBs\_P-C; FJ715342\_LHBs\_P-C; GQ475316\_LHBs\_P-C;  
GQ475327\_LHBs\_P-C; GQ475334\_LHBs\_P-C; JN315779\_LHBs\_P-C; EU939582\_LHBs\_P-C;  
KU964078\_LHBs\_P-C; KU964075\_LHBs\_P-C; KU964074\_LHBs\_P-C; KU964073\_LHBs\_P-C;  
KU964072\_LHBs\_P-C; KU964071\_LHBs\_P-C; KU964070\_LHBs\_P-C; KU964069\_LHBs\_P-C;  
KU964068\_LHBs\_P-C; KU964067\_LHBs\_P-C; KU964066\_LHBs\_P-C; KU964065\_LHBs\_P-C;  
KU963880\_LHBs\_P-C; KU963878\_LHBs\_P-C; EU554542\_LHBs\_P-C; EU939567\_LHBs\_P-C;  
EU939536\_LHBs\_P-C; AB014362\_LHBs\_P-C; AB014394\_LHBs\_P-C; AB026813\_LHBs\_P-C;  
FJ787469\_LHBs\_P-C; EU939605\_LHBs\_P-C; AB246345\_LHBs\_P-C; FJ899771\_LHBs\_P-C;  
FJ386659\_LHBs\_P-C; KU964243\_LHBs\_P-C; KU964238\_LHBs\_P-C; KU964236\_LHBs\_P-C;  
KJ598726\_LHBs\_P-C; KJ598720\_LHBs\_P-C; KJ598662\_LHBs\_P-C; AB670277\_LHBs\_P-C;  
GU357845\_LHBs\_P-C; KR013780\_LHBs\_P-C; EU093903\_LHBs\_P-C; KR013858\_LHBs\_P-C;



KR013794\_LHBs\_P-C; JQ040165\_LHBs\_P-C; EU086845\_LHBs\_P-C; FJ562241\_LHBs\_P-C;  
EU717212\_LHBs\_P-C; EU093898\_LHBs\_P-C; DQ975273\_LHBs\_P-C; EU939593\_LHBs\_P-C;  
EU093895\_LHBs\_P-C; JX504539\_LHBs\_P-C; FJ386598\_LHBs\_P-C; DQ478885\_LHBs\_P-C;  
KU964348\_LHBs\_P-C; KU964347\_LHBs\_P-C; KU964346\_LHBs\_P-C; KU964345\_LHBs\_P-C;  
KU964344\_LHBs\_P-C; KU964342\_LHBs\_P-C; KU964340\_LHBs\_P-C; KU964339\_LHBs\_P-C;  
KU964338\_LHBs\_P-C; KU964337\_LHBs\_P-C; KU964336\_LHBs\_P-C; KU964334\_LHBs\_P-C;  
KU964228\_LHBs\_P-C; KU964224\_LHBs\_P-C; KU964223\_LHBs\_P-C; KJ410505\_LHBs\_P-C;  
JQ412091\_LHBs\_P-RF-BC; KC774178\_LHBs\_P-RF-BC; KC774364\_LHBs\_P-RF-BC; HQ684848\_LHBs\_P-  
RF-CB; GQ377602\_LHBs\_P-RF-CB; GQ377534\_LHBs\_P-RF-CB; AB367400\_LHBs\_P-RF-CB;  
EU717211\_LHBs\_P-RF-CB; KJ717816\_LHBs\_P-RF-CB; EU939621\_LHBs\_P-RF-CB; GQ377626\_LHBs\_P-  
RF-CB; GQ377560\_LHBs\_P-RF-CB; FJ386586\_LHBs\_P-RF-CB; KU963883\_LHBs\_P-RF-CB;  
EU939668\_LHBs\_P-RF-CB; KP274926\_LHBs\_P-RF-GA

**202 Protein sequences are covered at 68 %:**

DQ298163\_LHBs\_P-A; DQ298164\_LHBs\_P-A; JF439924\_LHBs\_P-A; JN604220\_LHBs\_P-A;  
JF439949\_LHBs\_P-A; JN182332\_LHBs\_P-A; JN604251\_LHBs\_P-A; AY233282\_LHBs\_P-A;  
GQ331046\_LHBs\_P-A; JQ023661\_LHBs\_P-A; AB116083\_LHBs\_P-A; AB033555\_LHBs\_P-B;  
GQ358136\_LHBs\_P-B; EU439023\_LHBs\_P-B; GU451682\_LHBs\_P-B; AB246340\_LHBs\_P-B;  
AY163869\_LHBs\_P-B; AY163870\_LHBs\_P-B; AY217357\_LHBs\_P-B; AY217358\_LHBs\_P-B;  
FJ562236\_LHBs\_P-B; GQ377622\_LHBs\_P-B; AY217356\_LHBs\_P-B; AB713531\_LHBs\_P-B;  
FJ386683\_LHBs\_P-B; GQ358143\_LHBs\_P-B; AY596103\_LHBs\_P-B; FJ023634\_LHBs\_P-B;  
FJ562237\_LHBs\_P-B; AB900110\_LHBs\_P-B; GQ924644\_LHBs\_P-B; AB246341\_LHBs\_P-B;  
KJ803783\_LHBs\_P-B; KF053189\_LHBs\_P-B; KP659254\_LHBs\_P-B; KJ173375\_LHBs\_P-B;  
JX504538\_LHBs\_P-B; EU158263\_LHBs\_P-B; KP406298\_LHBs\_P-B; KC792890\_LHBs\_P-B;  
KC774377\_LHBs\_P-B; KC510658\_LHBs\_P-B; JN604253\_LHBs\_P-B; KC792930\_LHBs\_P-B;  
KC792884\_LHBs\_P-B; KU964397\_LHBs\_P-B; KU964395\_LHBs\_P-B; KU964393\_LHBs\_P-B;  
KU964391\_LHBs\_P-B; KU964388\_LHBs\_P-B; KU964385\_LHBs\_P-B; KU964384\_LHBs\_P-B;  
KU964383\_LHBs\_P-B; KU964382\_LHBs\_P-B; KU964381\_LHBs\_P-B; KP406280\_LHBs\_P-B;  
KM213034\_LHBs\_P-B; KJ173377\_LHBs\_P-B; KC792736\_LHBs\_P-B; KU964258\_LHBs\_P-B;  
KU964160\_LHBs\_P-B; KU964159\_LHBs\_P-B; KJ173385\_LHBs\_P-B; KC774376\_LHBs\_P-B;  
KC793106\_LHBs\_P-B; KU964107\_LHBs\_P-B; KU964104\_LHBs\_P-B; KU964102\_LHBs\_P-B;  
KU964101\_LHBs\_P-B; KP406278\_LHBs\_P-B; KP406270\_LHBs\_P-B; KP406255\_LHBs\_P-B;  
KC793029\_LHBs\_P-B; KC792937\_LHBs\_P-B; KP406259\_LHBs\_P-B; KP406256\_LHBs\_P-B;  
KU964153\_LHBs\_P-B; KP406245\_LHBs\_P-B; KP148349\_LHBs\_P-B; KP148343\_LHBs\_P-B;  
KC793146\_LHBs\_P-B; KC793094\_LHBs\_P-B; KC792900\_LHBs\_P-B; KP406249\_LHBs\_P-B;  
KJ803801\_LHBs\_P-B; KJ717813\_LHBs\_P-B; KJ173368\_LHBs\_P-B; KP406254\_LHBs\_P-B;  
KP406250\_LHBs\_P-B; KP406248\_LHBs\_P-B; KP406244\_LHBs\_P-B; KP406166\_LHBs\_P-B;  
KP341010\_LHBs\_P-B; KC774297\_LHBs\_P-C; FJ032355\_LHBs\_P-C; KR013882\_LHBs\_P-C;  
KR013815\_LHBs\_P-C; KC875263\_LHBs\_P-C; KC774340\_LHBs\_P-C; JX504541\_LHBs\_P-C;  
JX429914\_LHBs\_P-C; KC793019\_LHBs\_P-C; KR014015\_LHBs\_P-C; KR013813\_LHBs\_P-C;  
KR013800\_LHBs\_P-C; KJ598753\_LHBs\_P-C; KJ598686\_LHBs\_P-C; KJ598679\_LHBs\_P-C;  
KC792680\_LHBs\_P-C; KC792658\_LHBs\_P-C; JX125365\_LHBs\_P-C; KU964218\_LHBs\_P-C;  
KU964200\_LHBs\_P-C; KR013772\_LHBs\_P-C; KJ598680\_LHBs\_P-C; KJ598706\_LHBs\_P-C;  
JQ341622\_LHBs\_P-C; JN827420\_LHBs\_P-C; JQ801496\_LHBs\_P-C; JQ801473\_LHBs\_P-C;  
AY862869\_LHBs\_P-C; AB074755\_LHBs\_P-C; JQ341613\_LHBs\_P-C; JN827421\_LHBs\_P-C;  
KT987423\_LHBs\_P-C; JQ801497\_LHBs\_P-C; KJ410519\_LHBs\_P-C; KC774227\_LHBs\_P-C;  
JQ801522\_LHBs\_P-C; FJ787450\_LHBs\_P-C; AF411412\_LHBs\_P-C; AB367406\_LHBs\_P-C;  
FJ562264\_LHBs\_P-C; EU560439\_LHBs\_P-C; AB670243\_LHBs\_P-C; EU939649\_LHBs\_P-C;  
EU871975\_LHBs\_P-C; EU086842\_LHBs\_P-C; AB182589\_LHBs\_P-C; AB367398\_LHBs\_P-C;  
FJ386672\_LHBs\_P-C; AY596107\_LHBs\_P-C; AB670306\_LHBs\_P-C; AB367412\_LHBs\_P-C;





FJ386596\_LHBs\_P-C; FJ386687\_LHBs\_P-C; JN604133\_LHBs\_P-C; FJ386664\_LHBs\_P-C;  
EU939625\_LHBs\_P-C; EU871976\_LHBs\_P-C; D12980\_LHBs\_P-C; JF828928\_LHBs\_P-C;  
AY596108\_LHBs\_P-C; FJ386607\_LHBs\_P-C; KR013923\_LHBs\_P-C; FJ715370\_LHBs\_P-C;  
FJ715350\_LHBs\_P-C; AB298720\_LHBs\_P-C; AB298721\_LHBs\_P-C; FJ562249\_LHBs\_P-C;  
EU871978\_LHBs\_P-C; EU554536\_LHBs\_P-C; FJ023656\_LHBs\_P-C; KJ598663\_LHBs\_P-C;  
KJ598667\_LHBs\_P-C; KJ598668\_LHBs\_P-C; KJ598669\_LHBs\_P-C; KJ598671\_LHBs\_P-C;  
KJ598672\_LHBs\_P-C; KJ598673\_LHBs\_P-C; KJ598674\_LHBs\_P-C; KJ598676\_LHBs\_P-C;  
KJ598677\_LHBs\_P-C; KC792682\_LHBs\_P-C; KJ598670\_LHBs\_P-C; JX661493\_LHBs\_P-C;  
JQ040168\_LHBs\_P-C; HQ700561\_LHBs\_P-C; HQ700558\_LHBs\_P-C; HQ700544\_LHBs\_P-C;  
GQ377553\_LHBs\_P-C; FJ562292\_LHBs\_P-C; EU871977\_LHBs\_P-C; FJ386689\_LHBs\_P-C;  
EU916219\_LHBs\_P-C; GQ475322\_LHBs\_P-C; GQ377619\_LHBs\_P-C; FJ715400\_LHBs\_P-C;  
EU562218\_LHBs\_P-C; DQ089801\_LHBs\_P-C; FJ562298\_LHBs\_P-C; KU964222\_LHBs\_P-C;  
EU086840\_LHBs\_P-C; AB105172\_LHBs\_P-RF-CB; M38454\_LHBs\_P-RF-CB; EU871999\_LHBs\_P-RF-CB;  
Y18857\_LHBs\_P-RF-CB; KJ717814\_LHBs\_P-RF-CB; KJ803802\_LHBs\_P-RF-CB; KJ598675\_LHBs\_P-RF-CB;  
AB195939\_LHBs\_P-RF-CB; AY123041\_LHBs\_P-RF-CB

**305 Protein sequences are covered at 67 %:**

JQ707604\_LHBs\_P-A; JN604302\_LHBs\_P-A; GQ477477\_LHBs\_P-A; AY373432\_LHBs\_P-A;  
GQ161813\_LHBs\_P-A; KT347092\_LHBs\_P-A; KP234052\_LHBs\_P-A; KJ803787\_LHBs\_P-B;  
AY220704\_LHBs\_P-B; GU815627\_LHBs\_P-B; GU815628\_LHBs\_P-B; GU815629\_LHBs\_P-B;  
GU815630\_LHBs\_P-B; GU815631\_LHBs\_P-B; GU815636\_LHBs\_P-B; GU815637\_LHBs\_P-B;  
GU815638\_LHBs\_P-B; GU815641\_LHBs\_P-B; GU815644\_LHBs\_P-B; GU815645\_LHBs\_P-B;  
JX026886\_LHBs\_P-B; GQ924637\_LHBs\_P-B; AB287317\_LHBs\_P-B; JN792898\_LHBs\_P-B;  
JN792897\_LHBs\_P-B; DQ463800\_LHBs\_P-B; DQ463792\_LHBs\_P-B; FJ562224\_LHBs\_P-B;  
EU487257\_LHBs\_P-B; KJ717801\_LHBs\_P-B; FJ386688\_LHBs\_P-B; EU939675\_LHBs\_P-B;  
EU564826\_LHBs\_P-B; HM011474\_LHBs\_P-B; GU815780\_LHBs\_P-B; D00330\_LHBs\_P-B;  
AB205119\_LHBs\_P-B; AB073850\_LHBs\_P-B; KC774417\_LHBs\_P-B; KP659252\_LHBs\_P-B;  
KP406286\_LHBs\_P-B; GQ924634\_LHBs\_P-B; KJ173404\_LHBs\_P-B; KC792788\_LHBs\_P-B;  
KC774369\_LHBs\_P-B; KC510647\_LHBs\_P-B; JQ801494\_LHBs\_P-B; HM153811\_LHBs\_P-B;  
KU964161\_LHBs\_P-B; KU963946\_LHBs\_P-B; KJ717818\_LHBs\_P-B; KC792813\_LHBs\_P-B;  
KP406289\_LHBs\_P-B; KP406281\_LHBs\_P-B; KC792919\_LHBs\_P-B; KC774411\_LHBs\_P-B;  
KC492739\_LHBs\_P-B; KU964122\_LHBs\_P-B; KU964121\_LHBs\_P-B; KU964119\_LHBs\_P-B;  
KU964116\_LHBs\_P-B; KU964113\_LHBs\_P-B; KU964112\_LHBs\_P-B; KU964111\_LHBs\_P-B;  
KU964106\_LHBs\_P-B; KU964105\_LHBs\_P-B; KU964100\_LHBs\_P-B; KU964099\_LHBs\_P-B;  
KU964097\_LHBs\_P-B; KU964095\_LHBs\_P-B; KU964141\_LHBs\_P-B; KC792934\_LHBs\_P-B;  
KP406258\_LHBs\_P-B; KU963970\_LHBs\_P-B; KC792909\_LHBs\_P-B; KC792717\_LHBs\_P-B;  
KC793077\_LHBs\_P-B; KP406269\_LHBs\_P-B; AB111114\_LHBs\_P-C; KC774335\_LHBs\_P-C;  
HM750136\_LHBs\_P-C; KC774256\_LHBs\_P-C; KC774277\_LHBs\_P-C; KC774296\_LHBs\_P-C;  
AY247031\_LHBs\_P-C; KC774325\_LHBs\_P-C; KU964018\_LHBs\_P-C; KU964332\_LHBs\_P-C;  
KU964324\_LHBs\_P-C; KR013799\_LHBs\_P-C; KJ598768\_LHBs\_P-C; KJ173328\_LHBs\_P-C;  
KJ173327\_LHBs\_P-C; KC793201\_LHBs\_P-C; KJ598713\_LHBs\_P-C; KJ598660\_LHBs\_P-C;  
KJ598641\_LHBs\_P-C; KX276838\_LHBs\_P-C; KX276984\_LHBs\_P-C; KU963929\_LHBs\_P-C;  
KU963928\_LHBs\_P-C; KU963927\_LHBs\_P-C; KU963926\_LHBs\_P-C; KU963925\_LHBs\_P-C;  
KU963924\_LHBs\_P-C; KU963923\_LHBs\_P-C; KU963922\_LHBs\_P-C; KU963921\_LHBs\_P-C;  
KU963919\_LHBs\_P-C; KU963918\_LHBs\_P-C; KU963917\_LHBs\_P-C; KU963916\_LHBs\_P-C;  
KU963915\_LHBs\_P-C; KJ598718\_LHBs\_P-C; KJ598717\_LHBs\_P-C; KJ598711\_LHBs\_P-C;  
KJ598708\_LHBs\_P-C; KJ598707\_LHBs\_P-C; KJ598705\_LHBs\_P-C; KR013771\_LHBs\_P-C;  
KP148563\_LHBs\_P-C; KP148463\_LHBs\_P-C; KP148534\_LHBs\_P-C; KP148537\_LHBs\_P-C;  
KP148574\_LHBs\_P-C; KP148573\_LHBs\_P-C; KP148572\_LHBs\_P-C; KP148571\_LHBs\_P-C;  
KP148570\_LHBs\_P-C; KP148562\_LHBs\_P-C; KP148558\_LHBs\_P-C; KP148555\_LHBs\_P-C;



KP148554\_LHBs\_P-C; KP148552\_LHBs\_P-C; KP148549\_LHBs\_P-C; KP148547\_LHBs\_P-C;  
KP148543\_LHBs\_P-C; KP148540\_LHBs\_P-C; KP148538\_LHBs\_P-C; KP148530\_LHBs\_P-C;  
KP148529\_LHBs\_P-C; KP148528\_LHBs\_P-C; KP148520\_LHBs\_P-C; KP148519\_LHBs\_P-C;  
KP148517\_LHBs\_P-C; KP148488\_LHBs\_P-C; KP148482\_LHBs\_P-C; KP148480\_LHBs\_P-C;  
KP148471\_LHBs\_P-C; KP148468\_LHBs\_P-C; KP148462\_LHBs\_P-C; JQ341644\_LHBs\_P-C;  
JQ341637\_LHBs\_P-C; KJ717809\_LHBs\_P-C; AB074756\_LHBs\_P-C; AF068756\_LHBs\_P-C;  
FJ023647\_LHBs\_P-C; FJ023649\_LHBs\_P-C; FJ023657\_LHBs\_P-C; FJ023658\_LHBs\_P-C;  
GQ924604\_LHBs\_P-C; GQ924629\_LHBs\_P-C; GU563561\_LHBs\_P-C; KF214668\_LHBs\_P-C;  
KC875273\_LHBs\_P-C; KU051425\_LHBs\_P-C; KT987424\_LHBs\_P-C; KT364721\_LHBs\_P-C;  
KP017266\_LHBs\_P-C; KM999990\_LHBs\_P-C; KJ717811\_LHBs\_P-C; KC875271\_LHBs\_P-C;  
KC774228\_LHBs\_P-C; JQ801500\_LHBs\_P-C; JQ801486\_LHBs\_P-C; JN827422\_LHBs\_P-C;  
KT364718\_LHBs\_P-C; KT987426\_LHBs\_P-C; DQ246215\_LHBs\_P-C; DQ089777\_LHBs\_P-C;  
FJ349225\_LHBs\_P-C; GQ358154\_LHBs\_P-C; JN827416\_LHBs\_P-C; AB105173\_LHBs\_P-C;  
AF223954\_LHBs\_P-C; AF223957\_LHBs\_P-C; AF223961\_LHBs\_P-C; AP011097\_LHBs\_P-C;  
DQ089769\_LHBs\_P-C; DQ089779\_LHBs\_P-C; DQ089781\_LHBs\_P-C; DQ089782\_LHBs\_P-C;  
JQ341615\_LHBs\_P-C; FJ023653\_LHBs\_P-C; JN827424\_LHBs\_P-C; GQ377605\_LHBs\_P-C;  
FJ023641\_LHBs\_P-C; FJ023642\_LHBs\_P-C; KU964242\_LHBs\_P-C; KU964241\_LHBs\_P-C;  
KU964240\_LHBs\_P-C; KU964235\_LHBs\_P-C; KU964234\_LHBs\_P-C; KU964233\_LHBs\_P-C;  
KU964232\_LHBs\_P-C; KU964231\_LHBs\_P-C; KJ598739\_LHBs\_P-C; KJ598738\_LHBs\_P-C;  
KJ598737\_LHBs\_P-C; KJ598736\_LHBs\_P-C; KJ598735\_LHBs\_P-C; KJ598734\_LHBs\_P-C;  
KJ598733\_LHBs\_P-C; KJ598732\_LHBs\_P-C; KJ598729\_LHBs\_P-C; KJ598728\_LHBs\_P-C;  
KJ598727\_LHBs\_P-C; KJ598723\_LHBs\_P-C; KJ598722\_LHBs\_P-C; KJ598721\_LHBs\_P-C;  
KC774235\_LHBs\_P-C; KU051423\_LHBs\_P-C; KR013857\_LHBs\_P-C; KP017268\_LHBs\_P-C;  
KM875404\_LHBs\_P-C; KJ803799\_LHBs\_P-C; KJ803793\_LHBs\_P-C; KJ717810\_LHBs\_P-C;  
KJ717803\_LHBs\_P-C; KJ410513\_LHBs\_P-C; KJ410501\_LHBs\_P-C; JQ801519\_LHBs\_P-C;  
JQ801513\_LHBs\_P-C; JQ801511\_LHBs\_P-C; JQ801505\_LHBs\_P-C; JQ688403\_LHBs\_P-C;  
JQ341663\_LHBs\_P-C; JQ801502\_LHBs\_P-C; FJ386613\_LHBs\_P-C; FJ032351\_LHBs\_P-C;  
AB367424\_LHBs\_P-C; AB111119\_LHBs\_P-C; AB670265\_LHBs\_P-C; AB670300\_LHBs\_P-C;  
EU939648\_LHBs\_P-C; AB697490\_LHBs\_P-C; AB367804\_LHBs\_P-C; GQ377555\_LHBs\_P-C;  
FJ386591\_LHBs\_P-C; KJ173319\_LHBs\_P-C; GQ475318\_LHBs\_P-C; GQ475309\_LHBs\_P-C;  
GQ377559\_LHBs\_P-C; EU939548\_LHBs\_P-C; AB670297\_LHBs\_P-C; AB670258\_LHBs\_P-C;  
JF828924\_LHBs\_P-C; JF828926\_LHBs\_P-C; JF828930\_LHBs\_P-C; AB367434\_LHBs\_P-C;  
EU554537\_LHBs\_P-C; FJ386685\_LHBs\_P-C; AB014376\_LHBs\_P-C; AB111123\_LHBs\_P-C;  
AB642099\_LHBs\_P-C; AB014383\_LHBs\_P-C; FJ787468\_LHBs\_P-C; FJ715364\_LHBs\_P-C;  
KR013943\_LHBs\_P-C; KR014043\_LHBs\_P-C; KJ173396\_LHBs\_P-C; KT284755\_LHBs\_P-C;  
EU881996\_LHBs\_P-C; EU939644\_LHBs\_P-C; FJ386602\_LHBs\_P-C; FJ562266\_LHBs\_P-C;  
FJ562301\_LHBs\_P-C; EU939612\_LHBs\_P-C; FJ715358\_LHBs\_P-C; FJ715355\_LHBs\_P-C;  
KU964323\_LHBs\_P-C; KU964326\_LHBs\_P-C; KU964327\_LHBs\_P-C; KU964333\_LHBs\_P-C;  
FJ899764\_LHBs\_P-C; AB971714\_LHBs\_P-C; AB971715\_LHBs\_P-C; FJ562335\_LHBs\_P-C;  
KX276985\_LHBs\_P-C; KF779300\_LHBs\_P-C; GQ377594\_LHBs\_P-RF-CB; KJ803798\_LHBs\_P-RF-CB;  
GQ377573\_LHBs\_P-RF-CB; GQ377522\_LHBs\_P-RF-CB; AB195956\_LHBs\_P-RF-CB; AB195957\_LHBs\_P-RF-CB;  
AB195955\_LHBs\_P-RF-CB; GU385774\_LHBs\_P-RF-CB; AY247030\_LHBs\_P-RF-CB;  
KU963868\_LHBs\_P-RF-CB; JX661486\_LHBs\_P-RF-CB; JX661498\_LHBs\_P-RF-CB; AB049609\_LHBs\_P-RF-CB;  
AY161141\_LHBs\_P-RF-AD; AY161140\_LHBs\_P-RF-AD

**242 Protein sequences are covered at 66 %:**

AY161138\_LHBs\_P-A; JF439898\_LHBs\_P-A; JF439899\_LHBs\_P-A; JF439896\_LHBs\_P-A;  
JF439909\_LHBs\_P-A; KT347091\_LHBs\_P-A; AY233275\_LHBs\_P-A; KP148403\_LHBs\_P-B;  
KP148399\_LHBs\_P-B; KP148394\_LHBs\_P-B; KP148376\_LHBs\_P-B; KP341012\_LHBs\_P-B;  
KP148397\_LHBs\_P-B; KP148396\_LHBs\_P-B; KP148395\_LHBs\_P-B; KP148392\_LHBs\_P-B;



KP148390\_LHBs\_P-B; KP148389\_LHBs\_P-B; KP148388\_LHBs\_P-B; KP148384\_LHBs\_P-B;  
KP148383\_LHBs\_P-B; KP148379\_LHBs\_P-B; KP148375\_LHBs\_P-B; KP148372\_LHBs\_P-B;  
KP148370\_LHBs\_P-B; AB219428\_LHBs\_C-B; AP011087\_LHBs\_P-B; GQ924651\_LHBs\_P-B;  
GQ924654\_LHBs\_P-B; AB493835\_LHBs\_P-B; AP011090\_LHBs\_P-B; GQ924640\_LHBs\_P-B;  
GQ358141\_LHBs\_P-B; GQ358138\_LHBs\_P-B; AF121250\_LHBs\_P-B; AB642094\_LHBs\_P-B;  
GU434372\_LHBs\_P-B; GU815625\_LHBs\_P-B; FJ386658\_LHBs\_P-B; DQ463798\_LHBs\_P-B;  
JN792899\_LHBs\_P-B; GU815770\_LHBs\_P-B; AB493827\_LHBs\_P-B; AB900108\_LHBs\_P-B;  
GU815651\_LHBs\_P-B; GU815747\_LHBs\_P-B; GU815748\_LHBs\_P-B; FJ386610\_LHBs\_P-B;  
EU564822\_LHBs\_P-B; D23679\_LHBs\_P-B; AY596112\_LHBs\_P-B; AY217359\_LHBs\_P-B;  
AF282918\_LHBs\_P-B; JN604146\_LHBs\_P-B; GU815722\_LHBs\_P-B; FJ032357\_LHBs\_P-B;  
FJ023632\_LHBs\_P-B; EU919171\_LHBs\_P-B; AB900103\_LHBs\_P-B; KP659246\_LHBs\_P-B;  
KP659240\_LHBs\_P-B; KP659224\_LHBs\_P-B; FJ023635\_LHBs\_P-B; KC510655\_LHBs\_P-B;  
JQ341588\_LHBs\_P-B; FJ349236\_LHBs\_P-B; KC792742\_LHBs\_P-B; KP659234\_LHBs\_P-B;  
KC792697\_LHBs\_P-B; KC792666\_LHBs\_P-B; KP659255\_LHBs\_P-B; KC792664\_LHBs\_P-B;  
JN604284\_LHBs\_P-B; JN604223\_LHBs\_P-B; JN604154\_LHBs\_P-B; JN604125\_LHBs\_P-B;  
KU964254\_LHBs\_P-B; KP341013\_LHBs\_P-B; KJ173386\_LHBs\_P-B; KC774412\_LHBs\_P-B;  
X97851\_LHBs\_P-B; KU964096\_LHBs\_P-B; KP406257\_LHBs\_P-B; KC793059\_LHBs\_P-B;  
KC792996\_LHBs\_P-B; KC792910\_LHBs\_P-B; KP406265\_LHBs\_P-B; KJ803768\_LHBs\_P-B;  
KF053174\_LHBs\_P-B; KU964135\_LHBs\_P-B; KU963963\_LHBs\_P-B; KU963962\_LHBs\_P-B;  
KU964269\_LHBs\_P-B; KP406253\_LHBs\_P-B; KP148314\_LHBs\_P-B; KP406240\_LHBs\_P-B;  
KP406238\_LHBs\_P-B; KP341007\_LHBs\_P-B; KP406247\_LHBs\_P-B; KC792932\_LHBs\_P-B;  
KP406243\_LHBs\_P-B; KP406242\_LHBs\_P-B; KP406241\_LHBs\_P-B; KP406235\_LHBs\_P-B;  
KP406234\_LHBs\_P-B; KP406233\_LHBs\_P-B; KP406232\_LHBs\_P-B; KP406231\_LHBs\_P-B;  
KP406230\_LHBs\_P-B; KP406229\_LHBs\_P-B; KP406228\_LHBs\_P-B; KP406227\_LHBs\_P-B;  
KP406226\_LHBs\_P-B; KP406225\_LHBs\_P-B; KP406224\_LHBs\_P-B; KP406223\_LHBs\_P-B;  
KP406222\_LHBs\_P-B; KP406221\_LHBs\_P-B; KP406220\_LHBs\_P-B; AB205123\_LHBs\_P-C;  
KC774214\_LHBs\_P-C; KC774213\_LHBs\_P-C; KC793051\_LHBs\_P-C; KJ598769\_LHBs\_P-C;  
FJ386627\_LHBs\_P-C; KJ598709\_LHBs\_P-C; KU964077\_LHBs\_P-C; KC774301\_LHBs\_P-C;  
JX429913\_LHBs\_P-C; KR013763\_LHBs\_P-C; KR013762\_LHBs\_P-C; KU963920\_LHBs\_P-C;  
KF053161\_LHBs\_P-C; KJ803754\_LHBs\_P-C; GQ924614\_LHBs\_P-C; JQ801488\_LHBs\_P-C;  
KP148525\_LHBs\_P-C; KP148548\_LHBs\_P-C; KR013825\_LHBs\_P-C; KP148561\_LHBs\_P-C;  
KP148551\_LHBs\_P-C; KP148545\_LHBs\_P-C; KP148514\_LHBs\_P-C; JN604153\_LHBs\_P-C;  
JN827423\_LHBs\_P-C; DQ089772\_LHBs\_P-C; DQ089764\_LHBs\_P-C; DQ089765\_LHBs\_P-C;  
AB112471\_LHBs\_P-C; KX276848\_LHBs\_P-C; AB112472\_LHBs\_P-C; KC774284\_LHBs\_P-C;  
KU964239\_LHBs\_P-C; KU964230\_LHBs\_P-C; KJ598730\_LHBs\_P-C; KJ598724\_LHBs\_P-C;  
KJ803779\_LHBs\_P-C; KJ173324\_LHBs\_P-C; KF053176\_LHBs\_P-C; EU871969\_LHBs\_P-C;  
AB493839\_LHBs\_P-C; GQ377620\_LHBs\_P-C; FJ715416\_LHBs\_P-C; AB367396\_LHBs\_P-C;  
EU919168\_LHBs\_P-C; FJ715351\_LHBs\_P-C; FJ715390\_LHBs\_P-C; AB670262\_LHBs\_P-C;  
KR013851\_LHBs\_P-C; FJ715381\_LHBs\_P-C; DQ683578\_LHBs\_P-C; FJ899777\_LHBs\_P-C;  
D50519\_LHBs\_P-C; KC774289\_LHBs\_P-C; EU939561\_LHBs\_P-C; EU306721\_LHBs\_P-C;  
EU939550\_LHBs\_P-C; KC774260\_LHBs\_P-C; EU554541\_LHBs\_P-C; EU939588\_LHBs\_P-C;  
JF828921\_LHBs\_P-C; JF828918\_LHBs\_P-C; JF828920\_LHBs\_P-C; JF828913\_LHBs\_P-C;  
JF828915\_LHBs\_P-C; JF828917\_LHBs\_P-C; JF828916\_LHBs\_P-C; JF828919\_LHBs\_P-C;  
EU560440\_LHBs\_P-C; GQ377562\_LHBs\_P-C; FJ562265\_LHBs\_P-C; AB300360\_LHBs\_P-C;  
FJ787439\_LHBs\_P-C; DQ478899\_LHBs\_P-C; EU871980\_LHBs\_P-C; EU871998\_LHBs\_P-C;  
KJ598664\_LHBs\_P-C; FJ787458\_LHBs\_P-C; EU939616\_LHBs\_P-C; FJ787457\_LHBs\_P-C;  
JF436920\_LHBs\_P-C; KR013852\_LHBs\_P-C; FJ562255\_LHBs\_P-C; FJ386611\_LHBs\_P-C;  
KR013867\_LHBs\_P-C; KR013862\_LHBs\_P-C; KR013769\_LHBs\_P-C; EU939610\_LHBs\_P-C;  
FJ386657\_LHBs\_P-C; FJ787449\_LHBs\_P-C; FJ787453\_LHBs\_P-C; FJ787454\_LHBs\_P-C;



GQ475346\_LHBs\_P-C; AY306136\_LHBs\_P-C; EU939654\_LHBs\_P-C; AB670301\_LHBs\_P-C; FJ899783\_LHBs\_P-C; KC315400\_LHBs\_P-RF-CB; AP011102\_LHBs\_P-RF-CB; KC774188\_LHBs\_P-RF-CB; KC774234\_LHBs\_P-RF-CB; HQ700526\_LHBs\_P-RF-CB; KJ173350\_LHBs\_P-RF-CB; FJ715347\_LHBs\_P-RF-CB; FJ715346\_LHBs\_P-RF-CB; EU939630\_LHBs\_P-RF-CB; HQ700521\_LHBs\_P-RF-CB; AB195940\_LHBs\_P-RF-CB; AB195941\_LHBs\_P-RF-CB; AB493838\_LHBs\_P-RF-CB; GQ358155\_LHBs\_P-RF-CB; GQ358156\_LHBs\_P-RF-CB; KM999993\_LHBs\_P-RF-CB; KU695744\_LHBs\_P-RF-CB; HQ700485\_LHBs\_P-RF-CB; HQ700557\_LHBs\_P-RF-CB; FJ032343\_LHBs\_P-RF-CB; EU589337\_LHBs\_P-RF-CB; FJ715345\_LHBs\_P-RF-CB; AF411409\_LHBs\_P-RF-CB; AY161145\_LHBs\_P-RF-AD; AY161146\_LHBs\_P-RF-AD

**148 Protein sequences are covered at 65 %:**

AB453988\_LHBs\_P-A; FN545828\_LHBs\_P-A; EF473972\_LHBs\_P-B; AB713529\_LHBs\_P-B; AB219430\_LHBs\_P-B; DQ993702\_LHBs\_P-B; EU939672\_LHBs\_P-B; FJ899785\_LHBs\_P-B; EU919173\_LHBs\_P-B; EU919172\_LHBs\_P-B; EU919176\_LHBs\_P-B; EU939673\_LHBs\_P-B; AB073853\_LHBs\_P-B; JN792900\_LHBs\_P-B; AY033072\_LHBs\_P-B; FJ562234\_LHBs\_P-B; AB900095\_LHBs\_P-B; KC774397\_LHBs\_P-B; GU815610\_LHBs\_P-B; EU796068\_LHBs\_P-B; JX429897\_LHBs\_P-B; KJ843165\_LHBs\_P-B; KP406263\_LHBs\_P-B; KC793160\_LHBs\_P-B; KU964158\_LHBs\_P-B; KC793159\_LHBs\_P-B; KU964110\_LHBs\_P-B; KJ173298\_LHBs\_P-B; KP406276\_LHBs\_P-B; KC792959\_LHBs\_P-B; KC792883\_LHBs\_P-B; KP406261\_LHBs\_P-B; KU964115\_LHBs\_P-B; KP406260\_LHBs\_P-B; KJ803805\_LHBs\_P-B; KJ717817\_LHBs\_P-B; AP011107\_LHBs\_P-C; KC774179\_LHBs\_P-C; KX276991\_LHBs\_P-C; KC774281\_LHBs\_P-C; KU964214\_LHBs\_P-C; KU964004\_LHBs\_P-C; KJ598642\_LHBs\_P-C; KC774319\_LHBs\_P-C; KR013809\_LHBs\_P-C; KU964053\_LHBs\_P-C; KU964052\_LHBs\_P-C; KU964051\_LHBs\_P-C; KU964050\_LHBs\_P-C; KU964049\_LHBs\_P-C; KR013777\_LHBs\_P-C; KJ803762\_LHBs\_P-C; KF053170\_LHBs\_P-C; KU964220\_LHBs\_P-C; KU964217\_LHBs\_P-C; KU964216\_LHBs\_P-C; KU964054\_LHBs\_P-C; KU964055\_LHBs\_P-C; KU964056\_LHBs\_P-C; KU964057\_LHBs\_P-C; KU964058\_LHBs\_P-C; KU964059\_LHBs\_P-C; KU964060\_LHBs\_P-C; KU964061\_LHBs\_P-C; KU964062\_LHBs\_P-C; KU964063\_LHBs\_P-C; KP148492\_LHBs\_P-C; AF223958\_LHBs\_P-C; KP148532\_LHBs\_P-C; KP148475\_LHBs\_P-C; KP148466\_LHBs\_P-C; KJ173286\_LHBs\_P-C; KR013900\_LHBs\_P-C; KP148568\_LHBs\_P-C; KP148564\_LHBs\_P-C; KP148535\_LHBs\_P-C; KP148469\_LHBs\_P-C; JQ801503\_LHBs\_P-C; KJ803800\_LHBs\_P-C; KJ717812\_LHBs\_P-C; KC875265\_LHBs\_P-C; KT987425\_LHBs\_P-C; KT307718\_LHBs\_P-C; KT307719\_LHBs\_P-C; KU051426\_LHBs\_P-C; KU051427\_LHBs\_P-C; EF494379\_LHBs\_P-C; FJ023643\_LHBs\_P-C; FJ023644\_LHBs\_P-C; AF223955\_LHBs\_P-C; GQ377536\_LHBs\_P-C; AB112348\_LHBs\_P-C; KP148481\_LHBs\_P-C; KX276847\_LHBs\_P-C; KU963914\_LHBs\_P-C; KU963913\_LHBs\_P-C; KU963912\_LHBs\_P-C; KU963910\_LHBs\_P-C; KU963909\_LHBs\_P-C; KU963908\_LHBs\_P-C; KU963907\_LHBs\_P-C; KU963906\_LHBs\_P-C; KU963905\_LHBs\_P-C; KU963903\_LHBs\_P-C; KU963902\_LHBs\_P-C; KU963901\_LHBs\_P-C; KU963900\_LHBs\_P-C; KM875428\_LHBs\_P-C; KF053185\_LHBs\_P-C; KX276851\_LHBs\_P-C; KR013854\_LHBs\_P-C; FJ386604\_LHBs\_P-C; AB195943\_LHBs\_P-C; AB195944\_LHBs\_P-C; FJ787437\_LHBs\_P-C; EU939601\_LHBs\_P-C; EU554535\_LHBs\_P-C; AB195949\_LHBs\_P-C; AB367410\_LHBs\_P-C; KC774290\_LHBs\_P-C; FJ386679\_LHBs\_P-C; EU939585\_LHBs\_P-C; KR013778\_LHBs\_P-C; JF828929\_LHBs\_P-C; EU939586\_LHBs\_P-C; AB042282\_LHBs\_P-C; AB042283\_LHBs\_P-C; AF363961\_LHBs\_P-C; AB195931\_LHBs\_P-C; JX661497\_LHBs\_P-C; KR013866\_LHBs\_P-C; HQ700495\_LHBs\_P-C; GQ377570\_LHBs\_P-C; FJ715372\_LHBs\_P-C; EU939546\_LHBs\_P-C; FJ787447\_LHBs\_P-C; AB365451\_LHBs\_P-C; KU964343\_LHBs\_P-C; KU964225\_LHBs\_P-C; KU964227\_LHBs\_P-C; AP011104\_LHBs\_P-RF-CB; AP011105\_LHBs\_P-RF-CB; AP011108\_LHBs\_P-RF-CB; HQ700523\_LHBs\_P-RF-CB; GU357843\_LHBs\_P-RF-CB; KJ173325\_LHBs\_P-RF-CB; EU939577\_LHBs\_P-RF-CB; KF214656\_LHBs\_P-RF-AC

**201 Protein sequences are covered at 64 %:**



JF439866\_LHBs\_P-A; JF439907\_LHBs\_P-A; FN545835\_LHBs\_P-A; AB116094\_LHBs\_P-A;  
KC774418\_LHBs\_P-B; GQ358150\_LHBs\_P-B; GQ358151\_LHBs\_P-B; AB033554\_LHBs\_P-B;  
AP011086\_LHBs\_P-B; EU487256\_LHBs\_P-B; AB010290\_LHBs\_P-B; AB073858\_LHBs\_P-B;  
EU522072\_LHBs\_P-B; AY206375\_LHBs\_P-B; AY596106\_LHBs\_P-B; FJ899786\_LHBs\_P-B;  
GU815643\_LHBs\_P-B; EU939636\_LHBs\_P-B; AY206383\_LHBs\_P-B; FJ386600\_LHBs\_P-B;  
GQ377606\_LHBs\_P-B; AB287319\_LHBs\_P-B; JQ801524\_LHBs\_P-B; AB287321\_LHBs\_P-B;  
AF121248\_LHBs\_P-B; AB900107\_LHBs\_P-B; GU815777\_LHBs\_P-B; KP406190\_LHBs\_P-B;  
KP406212\_LHBs\_P-B; EU939639\_LHBs\_P-B; D23678\_LHBs\_P-B; GU815778\_LHBs\_P-B;  
FJ787475\_LHBs\_P-B; FJ386648\_LHBs\_P-B; AB900102\_LHBs\_P-B; DQ993705\_LHBs\_P-B;  
KC510646\_LHBs\_P-B; EU881997\_LHBs\_P-B; AY167098\_LHBs\_P-B; GQ924647\_LHBs\_P-B;  
AB073857\_LHBs\_P-B; KC774415\_LHBs\_P-B; KC774410\_LHBs\_P-B; GQ924628\_LHBs\_P-B;  
EF494380\_LHBs\_P-B; JQ027315\_LHBs\_P-B; KJ173341\_LHBs\_P-B; KC792678\_LHBs\_P-B;  
KC792648\_LHBs\_P-B; AB073832\_LHBs\_P-B; KP406287\_LHBs\_P-B; DQ995801\_LHBs\_P-B;  
KC792892\_LHBs\_P-B; KU964266\_LHBs\_P-B; KU964263\_LHBs\_P-B; KU964262\_LHBs\_P-B;  
KU964261\_LHBs\_P-B; KU964094\_LHBs\_P-B; KP406274\_LHBs\_P-B; KP406268\_LHBs\_P-B;  
KJ803820\_LHBs\_P-B; KJ717836\_LHBs\_P-B; KU964114\_LHBs\_P-B; KP406316\_LHBs\_P-B;  
KP406315\_LHBs\_P-B; KP406313\_LHBs\_P-B; KP406310\_LHBs\_P-B; KP406309\_LHBs\_P-B;  
KP406308\_LHBs\_P-B; KP406307\_LHBs\_P-B; KP406306\_LHBs\_P-B; KP148342\_LHBs\_P-B;  
KU964247\_LHBs\_P-B; KJ173342\_LHBs\_P-B; KU964146\_LHBs\_P-B; KP406277\_LHBs\_P-B;  
KP406252\_LHBs\_P-B; KP406246\_LHBs\_P-B; KM213032\_LHBs\_P-B; KC793178\_LHBs\_P-B;  
KC793069\_LHBs\_P-B; KC792938\_LHBs\_P-B; KC792903\_LHBs\_P-B; KP406236\_LHBs\_P-B;  
KP406251\_LHBs\_P-B; KP406271\_LHBs\_P-B; KC792978\_LHBs\_P-B; KC774211\_LHBs\_P-C;  
KU964019\_LHBs\_P-C; AB014385\_LHBs\_P-C; KU964013\_LHBs\_P-C; JX125372\_LHBs\_P-C;  
KU964014\_LHBs\_P-C; KT284757\_LHBs\_P-C; KC774208\_LHBs\_P-C; KC774207\_LHBs\_P-C;  
KC792740\_LHBs\_P-C; KR013773\_LHBs\_P-C; KF053183\_LHBs\_P-C; KJ803776\_LHBs\_P-C;  
FJ023645\_LHBs\_P-C; KP148524\_LHBs\_P-C; KP148521\_LHBs\_P-C; KP148513\_LHBs\_P-C;  
JQ801515\_LHBs\_P-C; AB247916\_LHBs\_P-C; KT364720\_LHBs\_P-C; KF214676\_LHBs\_P-C;  
KC875269\_LHBs\_P-C; KJ410515\_LHBs\_P-C; KR013820\_LHBs\_P-C; KP148526\_LHBs\_P-C;  
KU964237\_LHBs\_P-C; KJ598725\_LHBs\_P-C; KU051424\_LHBs\_P-C; KR013826\_LHBs\_P-C;  
KR013821\_LHBs\_P-C; KJ410489\_LHBs\_P-C; KR013902\_LHBs\_P-C; JX504537\_LHBs\_P-C;  
JQ801501\_LHBs\_P-C; EU871974\_LHBs\_P-C; EU871973\_LHBs\_P-C; FJ715405\_LHBs\_P-C;  
FJ715406\_LHBs\_P-C; FJ715404\_LHBs\_P-C; DQ089787\_LHBs\_P-C; JF828923\_LHBs\_P-C;  
FJ562228\_LHBs\_P-C; FJ715368\_LHBs\_P-C; KC774358\_LHBs\_P-C; FJ562334\_LHBs\_P-C;  
EU871971\_LHBs\_P-C; AB670260\_LHBs\_P-C; KR013861\_LHBs\_P-C; AB697510\_LHBs\_P-C;  
AB670298\_LHBs\_P-C; EU939614\_LHBs\_P-C; KR013853\_LHBs\_P-C; HM750137\_LHBs\_P-C;  
DQ377165\_LHBs\_P-C; FJ562324\_LHBs\_P-C; FJ899778\_LHBs\_P-C; JF828925\_LHBs\_P-C;  
AB367399\_LHBs\_P-C; FJ032334\_LHBs\_P-C; EU939564\_LHBs\_P-C; EU439015\_LHBs\_P-C;  
AB111121\_LHBs\_P-C; KR013849\_LHBs\_P-C; EU872001\_LHBs\_P-C; EU872003\_LHBs\_P-C;  
EU872004\_LHBs\_P-C; EU872002\_LHBs\_P-C; AB670264\_LHBs\_P-C; AB049610\_LHBs\_P-C;  
AB033552\_LHBs\_P-C; AB033556\_LHBs\_P-C; EU939544\_LHBs\_P-C; AB113878\_LHBs\_P-C;  
DQ089789\_LHBs\_P-C; KJ598666\_LHBs\_P-C; KJ598678\_LHBs\_P-C; KJ598665\_LHBs\_P-C;  
FJ562340\_LHBs\_P-C; EU670263\_LHBs\_P-C; GQ377608\_LHBs\_P-C; FJ386603\_LHBs\_P-C;  
FJ715395\_LHBs\_P-C; D23681\_LHBs\_P-C; GQ377618\_LHBs\_P-C; FJ715422\_LHBs\_P-C;  
FJ715392\_LHBs\_P-C; FJ386625\_LHBs\_P-C; FJ899761\_LHBs\_P-C; KU964020\_LHBs\_P-C;  
KU964021\_LHBs\_P-C; KU964022\_LHBs\_P-C; KU964023\_LHBs\_P-C; KU964024\_LHBs\_P-C;  
KU964025\_LHBs\_P-C; KU964026\_LHBs\_P-C; KU964027\_LHBs\_P-C; KU964028\_LHBs\_P-C;  
KU964029\_LHBs\_P-C; KU964030\_LHBs\_P-C; KU964031\_LHBs\_P-C; KU964032\_LHBs\_P-C;  
KU964033\_LHBs\_P-C; AB105174\_LHBs\_P-C; KF779327\_LHBs\_P-C; KF214652\_LHBs\_P-C;  
HQ700528\_LHBs\_P-RF-CB; KC774212\_LHBs\_P-RF-CB; KF053160\_LHBs\_P-RF-CB; KJ803753\_LHBs\_P-





RF-CB; AY206374\_LHBs\_P-RF-CB; HQ700462\_LHBs\_P-RF-CB; KR013843\_LHBs\_P-RF-CB;  
AB300369\_LHBs\_P-RF-CB; AB194949\_LHBs\_P-RF-AE

**103 Protein sequences are covered at 63 %:**

AB246336\_LHBs\_P-A; KU605533\_LHBs\_P-A; GQ358137\_LHBs\_P-B; FJ899784\_LHBs\_P-B;  
DQ463802\_LHBs\_P-B; DQ463790\_LHBs\_P-B; FJ023638\_LHBs\_P-B; GQ358140\_LHBs\_P-B;  
GQ358142\_LHBs\_P-B; AP011088\_LHBs\_P-B; FJ032358\_LHBs\_P-B; AB073842\_LHBs\_P-B;  
KC792948\_LHBs\_P-B; JQ341576\_LHBs\_P-B; KJ173297\_LHBs\_P-B; JQ801506\_LHBs\_P-B;  
JX504533\_LHBs\_P-B; KU964109\_LHBs\_P-B; KU964108\_LHBs\_P-B; KP406304\_LHBs\_P-B;  
KU963816\_LHBs\_P-B; KU964166\_LHBs\_P-B; KP406237\_LHBs\_P-B; KJ173379\_LHBs\_P-B;  
KC793104\_LHBs\_P-B; AP011106\_LHBs\_P-C; KJ410510\_LHBs\_P-C; EU939571\_LHBs\_P-C;  
KU964330\_LHBs\_P-C; KU964331\_LHBs\_P-C; KU964328\_LHBs\_P-C; KU964322\_LHBs\_P-C;  
KU964321\_LHBs\_P-C; KU964320\_LHBs\_P-C; KU964319\_LHBs\_P-C; KU964318\_LHBs\_P-C;  
KR013766\_LHBs\_P-C; LC090200\_LHBs\_P-C; KJ598712\_LHBs\_P-C; KP148483\_LHBs\_P-C;  
KP148491\_LHBs\_P-C; GQ184326\_LHBs\_P-C; EU306688\_LHBs\_P-C; EU306685\_LHBs\_P-C;  
EU306687\_LHBs\_P-C; EU306690\_LHBs\_P-C; EU306694\_LHBs\_P-C; KP148474\_LHBs\_P-C;  
KP148566\_LHBs\_P-C; KP148559\_LHBs\_P-C; KP148557\_LHBs\_P-C; JQ341642\_LHBs\_P-C;  
KP148531\_LHBs\_P-C; JX507214\_LHBs\_P-C; KP148523\_LHBs\_P-C; JQ801518\_LHBs\_P-C;  
JQ801470\_LHBs\_P-C; JQ801520\_LHBs\_P-C; GQ924612\_LHBs\_P-C; GQ924613\_LHBs\_P-C;  
AF473543\_LHBs\_P-C; FJ023654\_LHBs\_P-C; JN827417\_LHBs\_P-C; FJ023650\_LHBs\_P-C;  
AB112066\_LHBs\_P-C; KU963904\_LHBs\_P-C; JF899336\_LHBs\_P-C; EU871970\_LHBs\_P-C;  
DQ890381\_LHBs\_P-C; AB241111\_LHBs\_P-C; KR013868\_LHBs\_P-C; AB300368\_LHBs\_P-C;  
FJ715391\_LHBs\_P-C; FJ715418\_LHBs\_P-C; GQ377526\_LHBs\_P-C; AB195942\_LHBs\_P-C;  
FJ715421\_LHBs\_P-C; FJ032340\_LHBs\_P-C; DQ536412\_LHBs\_P-C; FJ032341\_LHBs\_P-C;  
EU939651\_LHBs\_P-C; FJ032345\_LHBs\_P-C; FJ899767\_LHBs\_P-C; EU939594\_LHBs\_P-C;  
FJ787479\_LHBs\_P-C; AB195932\_LHBs\_P-C; JX504534\_LHBs\_P-C; AB900099\_LHBs\_P-C;  
FJ715357\_LHBs\_P-C; KU964329\_LHBs\_P-C; FJ386653\_LHBs\_P-C; KX276981\_LHBs\_P-C;  
KC793112\_LHBs\_P-RF-BC; FJ562294\_LHBs\_P-RF-CB; KU964306\_LHBs\_P-RF-CB; KF053188\_LHBs\_P-  
RF-CB; KJ803782\_LHBs\_P-RF-CB; KJ717832\_LHBs\_P-RF-CB; GQ377604\_LHBs\_P-RF-CB;  
FR714496\_LHBs\_P-RF-CB; KJ410506\_LHBs\_P-RF-CB; JX661485\_LHBs\_P-RF-CB; FR714490\_LHBs\_P-RF-  
GB

**153 Protein sequences are covered at 62 %:**

JF439729\_LHBs\_P-A; JF439738\_LHBs\_P-A; JF439901\_LHBs\_P-A; JF439902\_LHBs\_P-A;  
JF439903\_LHBs\_P-A; JF439904\_LHBs\_P-A; JF439905\_LHBs\_P-A; JF439908\_LHBs\_P-A;  
AB076679\_LHBs\_P-A; JN604193\_LHBs\_P-A; AY934764\_LHBs\_P-A; KU605534\_LHBs\_P-A;  
AY233290\_LHBs\_P-A; EU882003\_LHBs\_P-B; AY800391\_LHBs\_P-B; AY800392\_LHBs\_P-B;  
AP011095\_LHBs\_P-B; KP148382\_LHBs\_P-B; KP148378\_LHBs\_P-B; KP148374\_LHBs\_P-B;  
KP148451\_LHBs\_P-B; KP148369\_LHBs\_P-B; JQ429082\_LHBs\_P-B; KP148371\_LHBs\_P-B;  
AP011096\_LHBs\_P-B; D00331\_LHBs\_C-B; GQ358145\_LHBs\_P-B; GQ358146\_LHBs\_P-B;  
AP011091\_LHBs\_P-B; AP011092\_LHBs\_P-B; AY206390\_LHBs\_P-B; FJ032349\_LHBs\_P-B;  
EU158262\_LHBs\_P-B; EU919175\_LHBs\_P-B; AB300371\_LHBs\_P-B; AB287327\_LHBs\_P-B;  
AB205122\_LHBs\_P-B; DQ463801\_LHBs\_P-B; JN792893\_LHBs\_P-B; DQ463793\_LHBs\_P-B;  
AB287314\_LHBs\_P-B; AB287315\_LHBs\_P-B; DQ463794\_LHBs\_P-B; EU305547\_LHBs\_P-B;  
KJ803797\_LHBs\_P-B; KJ717808\_LHBs\_P-B; FJ562312\_LHBs\_P-B; AB900104\_LHBs\_P-B;  
GU815783\_LHBs\_P-B; GU815776\_LHBs\_P-B; GU815773\_LHBs\_P-B; AB010291\_LHBs\_P-B;  
KC774362\_LHBs\_P-B; EU939667\_LHBs\_P-B; KC774368\_LHBs\_P-B; EU939669\_LHBs\_P-B;  
KU964253\_LHBs\_P-B; KU964244\_LHBs\_P-B; KU964292\_LHBs\_P-B; KC792851\_LHBs\_P-B;  
KC792931\_LHBs\_P-B; KJ803821\_LHBs\_P-B; KJ717837\_LHBs\_P-B; KU964301\_LHBs\_P-B;  
KU964299\_LHBs\_P-B; KU964298\_LHBs\_P-B; KU964297\_LHBs\_P-B; KU964296\_LHBs\_P-B;  
KU964295\_LHBs\_P-B; KU964294\_LHBs\_P-B; KU964293\_LHBs\_P-B; KU964290\_LHBs\_P-B;



KU964289\_LHBs\_P-B; KU964288\_LHBs\_P-B; KU964287\_LHBs\_P-B; KU964093\_LHBs\_P-B;  
KJ803756\_LHBs\_P-B; KJ717842\_LHBs\_P-B; KF053163\_LHBs\_P-B; KJ173372\_LHBs\_P-B;  
KC792789\_LHBs\_P-B; KU234318\_LHBs\_P-B; KP406275\_LHBs\_P-B; KC792719\_LHBs\_P-B;  
KC792855\_LHBs\_P-B; EU939633\_LHBs\_P-B; KU964016\_LHBs\_P-C; KU964011\_LHBs\_P-C;  
KU964017\_LHBs\_P-C; KC774306\_LHBs\_P-C; KU964012\_LHBs\_P-C; FJ899765\_LHBs\_P-C;  
KR013764\_LHBs\_P-C; GQ924650\_LHBs\_P-C; KJ803792\_LHBs\_P-C; KP148489\_LHBs\_P-C;  
KP148465\_LHBs\_P-C; KP148464\_LHBs\_P-C; KP148315\_LHBs\_P-C; JQ801523\_LHBs\_P-C;  
JQ801504\_LHBs\_P-C; DQ089778\_LHBs\_P-C; JN827418\_LHBs\_P-C; KJ410492\_LHBs\_P-C;  
KJ410499\_LHBs\_P-C; GQ924636\_LHBs\_P-C; KJ173285\_LHBs\_P-C; DQ089786\_LHBs\_P-C;  
GQ924616\_LHBs\_P-C; KJ717791\_LHBs\_P-C; KJ410495\_LHBs\_P-C; JN604286\_LHBs\_P-C;  
KJ410504\_LHBs\_P-C; KC875270\_LHBs\_P-C; KM875424\_LHBs\_P-C; KJ717822\_LHBs\_P-C;  
KJ803810\_LHBs\_P-C; KJ717821\_LHBs\_P-C; KJ803809\_LHBs\_P-C; FJ787467\_LHBs\_P-C;  
KR013870\_LHBs\_P-C; EU939647\_LHBs\_P-C; FJ715344\_LHBs\_P-C; KU964064\_LHBs\_P-C;  
EU919169\_LHBs\_P-C; D50520\_LHBs\_P-C; AY641559\_LHBs\_P-C; FJ562315\_LHBs\_P-C;  
AB670278\_LHBs\_P-C; EU579442\_LHBs\_P-C; AB033551\_LHBs\_P-C; KC792853\_LHBs\_P-C;  
FJ899769\_LHBs\_P-C; KC774245\_LHBs\_P-C; HQ700556\_LHBs\_P-C; EU796069\_LHBs\_P-C;  
AB675674\_LHBs\_P-C; AB675675\_LHBs\_P-C; KX276959\_LHBs\_P-C; FJ386612\_LHBs\_P-C;  
HQ700531\_LHBs\_P-RF-CB; KJ803785\_LHBs\_P-RF-CB; AB367419\_LHBs\_P-RF-CB; EF494378\_LHBs\_P-  
RF-CA; AB493840\_LHBs\_P-RF-CB; AB493837\_LHBs\_P-RF-CB; AP011103\_LHBs\_P-RF-CB;  
EU522070\_LHBs\_P-RF-CB; JQ040142\_LHBs\_P-RF-CB; HQ700547\_LHBs\_P-RF-CB; AB933279\_LHBs\_P-  
RF-AG; AB933280\_LHBs\_P-RF-AG; AB933281\_LHBs\_P-RF-AG

**74 Protein sequences are covered at 61 %:**

JF439900\_LHBs\_P-A; DQ463787\_LHBs\_P-B; GU815635\_LHBs\_P-B; AY217355\_LHBs\_P-B;  
AB900106\_LHBs\_P-B; GU815779\_LHBs\_P-B; AB073839\_LHBs\_P-B; DQ463796\_LHBs\_P-B;  
AB287322\_LHBs\_P-B; EF473977\_LHBs\_P-B; JN604138\_LHBs\_P-B; KC510650\_LHBs\_P-B;  
AB287326\_LHBs\_P-B; KP406179\_LHBs\_P-B; KP406182\_LHBs\_P-B; KC792980\_LHBs\_P-B;  
KC792887\_LHBs\_P-B; KU964256\_LHBs\_P-B; KU964255\_LHBs\_P-B; KU964248\_LHBs\_P-B;  
KU964302\_LHBs\_P-B; JQ341589\_LHBs\_P-B; KJ803816\_LHBs\_P-B; KJ717829\_LHBs\_P-B;  
KP406266\_LHBs\_P-B; KP406239\_LHBs\_P-B; EU075315\_LHBs\_P-C; KJ598715\_LHBs\_P-C;  
AB117758\_LHBs\_P-C; EU305540\_LHBs\_P-C; KP148567\_LHBs\_P-C; KJ803812\_LHBs\_P-C;  
KJ717825\_LHBs\_P-C; JN604121\_LHBs\_P-C; KT364719\_LHBs\_P-C; KR013855\_LHBs\_P-C;  
KP148473\_LHBs\_P-C; JQ801490\_LHBs\_P-C; AB300363\_LHBs\_P-C; DQ089788\_LHBs\_P-C;  
GQ924609\_LHBs\_P-C; AB205125\_LHBs\_P-C; JQ341616\_LHBs\_P-C; KJ598731\_LHBs\_P-C;  
KU964229\_LHBs\_P-C; KR013837\_LHBs\_P-C; JX870000\_LHBs\_P-C; KR013856\_LHBs\_P-C;  
KR013840\_LHBs\_P-C; KR013770\_LHBs\_P-C; KP148477\_LHBs\_P-C; KP148472\_LHBs\_P-C;  
JQ801495\_LHBs\_P-C; JQ801475\_LHBs\_P-C; FJ562299\_LHBs\_P-C; AB113875\_LHBs\_P-C;  
AB113876\_LHBs\_P-C; KR014077\_LHBs\_P-C; KR014082\_LHBs\_P-C; AB367395\_LHBs\_P-C;  
AB931171\_LHBs\_P-C; AF533983\_LHBs\_P-C; EU939572\_LHBs\_P-C; FJ787471\_LHBs\_P-C;  
EU939542\_LHBs\_P-C; AB111120\_LHBs\_P-C; AY206381\_LHBs\_P-C; FJ386631\_LHBs\_P-C;  
GQ475351\_LHBs\_P-C; EU939631\_LHBs\_P-RF-BC; KU695746\_LHBs\_P-RF-CB; AB195951\_LHBs\_P-RF-  
CB; AB195950\_LHBs\_P-RF-CB; KP148586\_LHBs\_P-RF-GC

**144 Protein sequences are covered at 60 %:**

JF439726\_LHBs\_P-A; JF439897\_LHBs\_P-A; JF439747\_LHBs\_P-A; JF439721\_LHBs\_P-A;  
JF439735\_LHBs\_P-A; JF439736\_LHBs\_P-A; JF439737\_LHBs\_P-A; AB194951\_LHBs\_P-A;  
HM363613\_LHBs\_P-A; GQ358147\_LHBs\_P-B; KP148398\_LHBs\_P-B; KP148387\_LHBs\_P-B;  
KP148373\_LHBs\_P-B; KP148401\_LHBs\_P-B; KP148386\_LHBs\_P-B; KP148385\_LHBs\_P-B;  
KP148368\_LHBs\_P-B; GQ358149\_LHBs\_P-B; GQ358152\_LHBs\_P-B; GU815642\_LHBs\_P-B;  
AY220703\_LHBs\_P-B; AB287323\_LHBs\_P-B; AB555498\_LHBs\_P-B; AB073835\_LHBs\_P-B;  
DQ993680\_LHBs\_P-B; DQ993683\_LHBs\_P-B; DQ993685\_LHBs\_P-B; DQ993681\_LHBs\_P-B;



AB219427\_LHBs\_P-B; AB931169\_LHBs\_P-B; FJ562253\_LHBs\_P-B; AB073855\_LHBs\_P-B;  
KP659238\_LHBs\_P-B; AB900111\_LHBs\_P-B; AB205121\_LHBs\_P-B; AB073852\_LHBs\_P-B;  
AB073845\_LHBs\_P-B; AB031267\_LHBs\_P-B; EU939678\_LHBs\_P-B; KP659223\_LHBs\_P-B;  
JX504531\_LHBs\_P-B; GU815782\_LHBs\_P-B; GU815781\_LHBs\_P-B; GU815775\_LHBs\_P-B;  
GU815772\_LHBs\_P-B; AB302944\_LHBs\_P-B; AB302943\_LHBs\_P-B; AB302942\_LHBs\_P-B;  
KJ803784\_LHBs\_P-B; KF053190\_LHBs\_P-B; FJ899779\_LHBs\_P-B; KC793073\_LHBs\_P-B;  
KC792660\_LHBs\_P-B; KP406187\_LHBs\_P-B; KP406199\_LHBs\_P-B; KP406186\_LHBs\_P-B;  
KP406189\_LHBs\_P-B; KP406191\_LHBs\_P-B; KP406192\_LHBs\_P-B; KP406193\_LHBs\_P-B;  
KP406196\_LHBs\_P-B; KP406197\_LHBs\_P-B; KP406198\_LHBs\_P-B; KP406201\_LHBs\_P-B;  
KP406202\_LHBs\_P-B; KP406203\_LHBs\_P-B; KP406204\_LHBs\_P-B; KP406205\_LHBs\_P-B;  
KP406206\_LHBs\_P-B; KP406207\_LHBs\_P-B; KP406208\_LHBs\_P-B; KP406209\_LHBs\_P-B;  
KP406210\_LHBs\_P-B; KP406211\_LHBs\_P-B; KP406213\_LHBs\_P-B; KP406214\_LHBs\_P-B;  
KP406215\_LHBs\_P-B; KP406218\_LHBs\_P-B; KP406219\_LHBs\_P-B; KC792860\_LHBs\_P-B;  
KU964270\_LHBs\_P-B; KU964268\_LHBs\_P-B; KU964264\_LHBs\_P-B; KU964259\_LHBs\_P-B;  
KU964257\_LHBs\_P-B; KU964260\_LHBs\_P-B; KC792915\_LHBs\_P-B; KU964118\_LHBs\_P-B;  
KU964015\_LHBs\_P-C; KC793119\_LHBs\_P-C; FJ032356\_LHBs\_P-C; KF214655\_LHBs\_P-C;  
KU964325\_LHBs\_P-C; KR014010\_LHBs\_P-C; KC793129\_LHBs\_P-C; KC774267\_LHBs\_P-C;  
KR013823\_LHBs\_P-C; KP148512\_LHBs\_P-C; KC875274\_LHBs\_P-C; KF053181\_LHBs\_P-C;  
KJ803774\_LHBs\_P-C; DQ089763\_LHBs\_P-C; JN604243\_LHBs\_P-C; KC875264\_LHBs\_P-C;  
KJ410493\_LHBs\_P-C; AF182803\_LHBs\_P-C; AF182802\_LHBs\_P-C; EU939579\_LHBs\_P-C;  
JN827414\_LHBs\_P-C; JN827415\_LHBs\_P-C; AB241110\_LHBs\_P-C; AP011099\_LHBs\_P-C;  
AP011100\_LHBs\_P-C; AP011101\_LHBs\_P-C; EU410080\_LHBs\_P-C; EU410081\_LHBs\_P-C;  
KM999992\_LHBs\_P-C; KR013860\_LHBs\_P-C; KM875423\_LHBs\_P-C; KT284758\_LHBs\_P-C;  
FJ787470\_LHBs\_P-C; FJ899770\_LHBs\_P-C; KR013844\_LHBs\_P-C; AB195930\_LHBs\_P-C;  
EU522068\_LHBs\_P-C; FJ787448\_LHBs\_P-C; HQ700569\_LHBs\_P-C; EU570073\_LHBs\_P-C;  
EU570074\_LHBs\_P-C; FJ787452\_LHBs\_P-C; FJ899789\_LHBs\_P-C; FJ715397\_LHBs\_P-C;  
EU939653\_LHBs\_P-C; AB367402\_LHBs\_P-C; EU882006\_LHBs\_P-RF-CB; KF053179\_LHBs\_P-RF-BC;  
KJ803772\_LHBs\_P-RF-BC; HQ684849\_LHBs\_P-RF-BC; KP148352\_LHBs\_P-RF-CB; EU939547\_LHBs\_P-  
RF-CB; FJ562328\_LHBs\_P-RF-CB; FJ562226\_LHBs\_P-RF-CB; HQ700532\_LHBs\_P-RF-CB;  
EU833890\_LHBs\_P-RF-GA

**55 Protein sequences are covered at 59 %:**

KP148377\_LHBs\_P-B; KJ717806\_LHBs\_P-B; KJ803795\_LHBs\_P-B; AB246343\_LHBs\_P-B;  
KJ717843\_LHBs\_P-B; KJ803825\_LHBs\_P-B; GQ924638\_LHBs\_P-B; GQ924630\_LHBs\_P-B;  
EU881998\_LHBs\_P-B; GQ924624\_LHBs\_P-B; AB231909\_LHBs\_P-B; AB100695\_LHBs\_P-B;  
AB010292\_LHBs\_P-B; AB365445\_LHBs\_P-B; AJ627225\_LHBs\_P-B; KX276784\_LHBs\_P-B;  
KJ173378\_LHBs\_P-B; KC793023\_LHBs\_P-B; KC792901\_LHBs\_P-B; KU964271\_LHBs\_P-B;  
KU964267\_LHBs\_P-B; KJ173335\_LHBs\_P-C; KR013767\_LHBs\_P-C; DQ089790\_LHBs\_P-C;  
KR014021\_LHBs\_P-C; KJ410514\_LHBs\_P-C; GQ924643\_LHBs\_P-C; KR013841\_LHBs\_P-C;  
KJ717839\_LHBs\_P-C; KJ803823\_LHBs\_P-C; KR013836\_LHBs\_P-C; KU963911\_LHBs\_P-C;  
KR013824\_LHBs\_P-C; KF214667\_LHBs\_P-C; D23682\_LHBs\_P-C; D23683\_LHBs\_P-C;  
EU939596\_LHBs\_P-C; AB367401\_LHBs\_P-C; KJ717833\_LHBs\_P-C; KR014083\_LHBs\_P-C;  
AF241410\_LHBs\_P-C; GQ924622\_LHBs\_P-C; FJ899773\_LHBs\_P-C; GU721029\_LHBs\_P-C;  
EU872000\_LHBs\_P-C; EU939609\_LHBs\_P-C; X75665\_LHBs\_P-C; HQ700490\_LHBs\_P-C;  
KR013869\_LHBs\_P-C; FJ386589\_LHBs\_P-C; AB367435\_LHBs\_P-C; FJ349241\_LHBs\_P-RF-DC;  
HQ700520\_LHBs\_P-RF-CB; KC774431\_LHBs\_P-RF-DC; AB367800\_LHBs\_P-RF-CB

**106 Protein sequences are covered at 58 %:**

JF439722\_LHBs\_P-A; JF439720\_LHBs\_P-A; JF439743\_LHBs\_P-A; JF439730\_LHBs\_P-A;  
JF439746\_LHBs\_P-A; JF439748\_LHBs\_P-A; JF439910\_LHBs\_P-A; FN545829\_LHBs\_P-A;  
AB713528\_LHBs\_P-B; KP148439\_LHBs\_P-B; KP148432\_LHBs\_P-B; KP148424\_LHBs\_P-B;



KP148418\_LHBs\_P-B; KP148367\_LHBs\_P-B; FJ899787\_LHBs\_P-B; FJ562259\_LHBs\_P-B;  
JN792901\_LHBs\_P-B; EU939674\_LHBs\_P-B; FJ899790\_LHBs\_P-B; FJ899791\_LHBs\_P-B;  
GQ924656\_LHBs\_P-B; AP011093\_LHBs\_P-B; JN792894\_LHBs\_P-B; FJ023631\_LHBs\_P-B;  
AB219426\_LHBs\_P-B; AB073844\_LHBs\_P-B; EU330996\_LHBs\_P-B; EU330997\_LHBs\_P-B;  
AY206391\_LHBs\_P-B; GU815774\_LHBs\_P-B; GQ924646\_LHBs\_P-B; AY167093\_LHBs\_P-B;  
AB713527\_LHBs\_P-B; JQ707739\_LHBs\_P-B; GQ924625\_LHBs\_P-B; JQ707762\_LHBs\_P-B;  
JQ707755\_LHBs\_P-B; KP148429\_LHBs\_P-B; KP148423\_LHBs\_P-B; KP148410\_LHBs\_P-B;  
AB302945\_LHBs\_P-B; KP659239\_LHBs\_P-B; KC793043\_LHBs\_P-B; JQ707740\_LHBs\_P-B;  
KU964394\_LHBs\_P-B; KU964249\_LHBs\_P-B; KP659244\_LHBs\_P-B; KP148415\_LHBs\_P-B;  
KP148413\_LHBs\_P-B; KP148409\_LHBs\_P-B; KP148405\_LHBs\_P-B; KJ173384\_LHBs\_P-B;  
KP406188\_LHBs\_P-B; KP406195\_LHBs\_P-B; KP406200\_LHBs\_P-B; KP406217\_LHBs\_P-B;  
KC793092\_LHBs\_P-B; KC793045\_LHBs\_P-B; KP406267\_LHBs\_P-B; X97850\_LHBs\_P-B;  
KM213035\_LHBs\_P-B; KC792969\_LHBs\_P-B; KC875272\_LHBs\_P-C; KC774189\_LHBs\_P-C;  
KF053193\_LHBs\_P-C; KF053177\_LHBs\_P-C; KJ803770\_LHBs\_P-C; KJ717844\_LHBs\_P-C;  
KJ803826\_LHBs\_P-C; DQ478901\_LHBs\_P-C; AB031262\_LHBs\_P-C; DQ089783\_LHBs\_P-C;  
AF223960\_LHBs\_P-C; GQ924655\_LHBs\_P-C; DQ089771\_LHBs\_P-C; KJ410518\_LHBs\_P-C;  
KF214673\_LHBs\_P-C; JQ801481\_LHBs\_P-C; KJ410496\_LHBs\_P-C; JQ801498\_LHBs\_P-C;  
FJ715415\_LHBs\_P-C; AY220699\_LHBs\_P-C; KX276963\_LHBs\_P-C; KR013859\_LHBs\_P-C;  
EU093900\_LHBs\_P-C; EU939539\_LHBs\_P-C; KR013848\_LHBs\_P-C; AB014396\_LHBs\_P-C;  
GQ924642\_LHBs\_P-C; KC792831\_LHBs\_P-C; KC793108\_LHBs\_P-C; HQ700502\_LHBs\_P-C;  
HQ700545\_LHBs\_P-C; JN604222\_LHBs\_P-C; HQ700564\_LHBs\_P-C; HQ700573\_LHBs\_P-C;  
HQ700565\_LHBs\_P-C; HQ700577\_LHBs\_P-C; AF458665\_LHBs\_P-C; FR714503\_LHBs\_P-G;  
KT003704\_LHBs\_P-RF-CB; EU881995\_LHBs\_P-RF-CB; FJ562317\_LHBs\_P-RF-CB; KJ803804\_LHBs\_P-RF-  
CB; KJ586810\_LHBs\_P-RF-AF; FJ023662\_LHBs\_P-RF-GC

**38 Protein sequences are covered at 57 %:**

JF439739\_LHBs\_P-A; JF439731\_LHBs\_P-A; AB116092\_LHBs\_P-A; AB073856\_LHBs\_P-B;  
AB117759\_LHBs\_P-B; DQ993686\_LHBs\_P-B; GU357842\_LHBs\_P-B; EU939671\_LHBs\_P-B;  
FJ023636\_LHBs\_P-B; EU939661\_LHBs\_P-B; KU964252\_LHBs\_P-B; KU964250\_LHBs\_P-B;  
KP148425\_LHBs\_P-B; KP406176\_LHBs\_P-B; KP406180\_LHBs\_P-B; KP148437\_LHBs\_P-B;  
KC793124\_LHBs\_P-B; KU964300\_LHBs\_P-B; KU964265\_LHBs\_P-B; KJ717796\_LHBs\_P-B;  
KC793197\_LHBs\_P-B; FJ386620\_LHBs\_P-C; KR014011\_LHBs\_P-C; AB014378\_LHBs\_P-C;  
KF053187\_LHBs\_P-C; KJ803780\_LHBs\_P-C; KR013822\_LHBs\_P-C; KR013838\_LHBs\_P-C;  
KJ410491\_LHBs\_P-C; EU871972\_LHBs\_P-C; AB014392\_LHBs\_P-C; HQ700516\_LHBs\_P-C;  
EF536066\_LHBs\_P-C; JX036332\_LHBs\_P-RF-DC; KC774324\_LHBs\_P-RF-CB; EU939623\_LHBs\_P-RF-CB;  
HQ700518\_LHBs\_P-RF-CB; KC172106\_LHBs\_P-RF-GB

**59 Protein sequences are covered at 56 %:**

JF439906\_LHBs\_P-A; JF439724\_LHBs\_P-A; KX276970\_LHBs\_P-B; DQ463795\_LHBs\_P-B;  
AB073838\_LHBs\_P-B; AY220697\_LHBs\_P-B; DQ904357\_LHBs\_P-B; GQ358144\_LHBs\_P-B;  
AB073847\_LHBs\_P-B; KC792671\_LHBs\_P-B; AB900096\_LHBs\_P-B; AB287320\_LHBs\_P-B;  
EU589335\_LHBs\_P-B; JX026879\_LHBs\_P-B; EU330989\_LHBs\_P-B; EU330990\_LHBs\_P-B;  
EU330995\_LHBs\_P-B; AB931168\_LHBs\_P-B; EU882004\_LHBs\_P-B; AB073841\_LHBs\_P-B;  
AB368295\_LHBs\_P-B; JX026883\_LHBs\_P-B; KJ803789\_LHBs\_P-B; KJ717795\_LHBs\_P-B;  
KU964291\_LHBs\_P-B; KJ803758\_LHBs\_P-B; KF053165\_LHBs\_P-B; KJ803773\_LHBs\_P-B;  
KJ803755\_LHBs\_P-B; KF053180\_LHBs\_P-B; KF053162\_LHBs\_P-B; KJ803775\_LHBs\_P-B;  
KF053182\_LHBs\_P-B; JQ341560\_LHBs\_P-B; KC774269\_LHBs\_P-C; JX026877\_LHBs\_P-C;  
JQ801493\_LHBs\_P-C; EU306691\_LHBs\_P-C; EU306689\_LHBs\_P-C; JX504535\_LHBs\_P-C;  
JQ801482\_LHBs\_P-C; EU305541\_LHBs\_P-C; KR013835\_LHBs\_P-C; KJ410494\_LHBs\_P-C;  
KF214670\_LHBs\_P-C; KR013871\_LHBs\_P-C; DQ377164\_LHBs\_P-C; EU570072\_LHBs\_P-C;  
KR013842\_LHBs\_P-C; AB670253\_LHBs\_P-C; HQ700570\_LHBs\_P-C; AB111946\_LHBs\_P-C;



AB270535\_LHBs\_P-RF-DC; KJ717800\_LHBs\_P-RF-CB; KJ803791\_LHBs\_P-RF-CB; JF436923\_LHBs\_P-RF-CB; X75656\_LHBs\_P-RF-CB; JQ801476\_LHBs\_P-RF-CG; EF464099\_LHBs\_P-RF-AG

**65 Protein sequences are covered at 55 %:**

JN604141\_LHBs\_P-B; KP148458\_LHBs\_P-B; KP148455\_LHBs\_P-B; KP148456\_LHBs\_P-B; KP148461\_LHBs\_P-B; KP148452\_LHBs\_P-B; JN604123\_LHBs\_P-B; AB362933\_LHBs\_P-B; KP659219\_LHBs\_P-B; KP148411\_LHBs\_P-B; KP148435\_LHBs\_P-B; KJ803796\_LHBs\_P-B; KJ717807\_LHBs\_P-B; KJ173371\_LHBs\_P-B; KP406171\_LHBs\_P-B; KP406163\_LHBs\_P-B; KC792918\_LHBs\_P-B; KP406173\_LHBs\_P-B; KP406167\_LHBs\_P-B; AB367392\_LHBs\_P-C; KP148575\_LHBs\_P-C; FJ899774\_LHBs\_P-C; JQ341632\_LHBs\_P-C; AB931170\_LHBs\_P-C; FJ787441\_LHBs\_P-C; HQ700563\_LHBs\_P-C; HM750143\_LHBs\_P-RF-DC; KX660686\_LHBs\_P-RF-DC; KC774456\_LHBs\_P-RF-DC; HM750144\_LHBs\_P-RF-DC; KC774453\_LHBs\_P-RF-DC; HM750149\_LHBs\_P-RF-DC; HM750142\_LHBs\_P-RF-DC; HM750146\_LHBs\_P-RF-DC; HM750148\_LHBs\_P-RF-DC; KC774482\_LHBs\_P-RF-DC; KP276253\_LHBs\_P-RF-DC; KP276256\_LHBs\_P-RF-DC; KC774430\_LHBs\_P-RF-DC; KC774468\_LHBs\_P-RF-DC; JF491455\_LHBs\_P-RF-DC; AY862866\_LHBs\_P-RF-DC; DQ478887\_LHBs\_P-RF-DC; DQ478889\_LHBs\_P-RF-DC; DQ478897\_LHBs\_P-RF-DC; JF491449\_LHBs\_P-RF-DC; JX429898\_LHBs\_P-RF-DC; KC774424\_LHBs\_P-RF-DC; KC774432\_LHBs\_P-RF-DC; KC774433\_LHBs\_P-RF-DC; KC774434\_LHBs\_P-RF-DC; KC774439\_LHBs\_P-RF-DC; KC774472\_LHBs\_P-RF-DC; KX660675\_LHBs\_P-RF-DC; KU519422\_LHBs\_P-RF-DC; KP276254\_LHBs\_P-RF-DC; KC774497\_LHBs\_P-RF-DC; KC774493\_LHBs\_P-RF-DC; KC774488\_LHBs\_P-RF-DC; KC774463\_LHBs\_P-RF-DC; KX660680\_LHBs\_P-RF-DC; KX660674\_LHBs\_P-RF-DC; KC774476\_LHBs\_P-RF-DC; KC774454\_LHBs\_P-RF-DC; FJ023670\_LHBs\_P-RF-GC

**67 Protein sequences are covered at 54 %:**

JF439742\_LHBs\_P-A; KP148420\_LHBs\_P-B; KP148391\_LHBs\_P-B; KP148380\_LHBs\_P-B; JQ707734\_LHBs\_P-B; JQ707735\_LHBs\_P-B; JQ707737\_LHBs\_P-B; JQ707738\_LHBs\_P-B; JQ707742\_LHBs\_P-B; JQ707743\_LHBs\_P-B; JQ707744\_LHBs\_P-B; JQ707745\_LHBs\_P-B; JQ707746\_LHBs\_P-B; JQ707749\_LHBs\_P-B; JQ707750\_LHBs\_P-B; JQ707753\_LHBs\_P-B; JQ707758\_LHBs\_P-B; JQ707759\_LHBs\_P-B; JQ707763\_LHBs\_P-B; JQ707765\_LHBs\_P-B; JQ707766\_LHBs\_P-B; FJ032342\_LHBs\_P-B; EU939635\_LHBs\_P-B; D50522\_LHBs\_P-B; AB287325\_LHBs\_P-B; AB287318\_LHBs\_P-B; GQ924639\_LHBs\_P-B; AY167100\_LHBs\_P-B; FJ386608\_LHBs\_P-B; DQ993682\_LHBs\_P-B; GQ358139\_LHBs\_P-B; FJ386669\_LHBs\_P-B; JQ801474\_LHBs\_P-B; AB212625\_LHBs\_P-B; KU964246\_LHBs\_P-B; KJ803781\_LHBs\_P-B; KJ173383\_LHBs\_P-B; KF053194\_LHBs\_P-B; KP148430\_LHBs\_P-B; KJ717798\_LHBs\_P-B; KC793078\_LHBs\_P-B; X98077\_LHBs\_P-B; KC792820\_LHBs\_P-B; KC792733\_LHBs\_P-B; KR013827\_LHBs\_P-C; JX036327\_LHBs\_P-C; X52939\_LHBs\_P-C; KF214671\_LHBs\_P-C; KF053173\_LHBs\_P-C; KJ803766\_LHBs\_P-C; KR013839\_LHBs\_P-C; KR014078\_LHBs\_P-C; JN604226\_LHBs\_P-C; EU093902\_LHBs\_P-C; KC774353\_LHBs\_P-C; KF053184\_LHBs\_P-C; KJ803777\_LHBs\_P-C; AB900113\_LHBs\_P-C; KF053186\_LHBs\_P-RF-BC; KJ803778\_LHBs\_P-RF-BC; KX660689\_LHBs\_P-RF-DC; KC774428\_LHBs\_P-RF-DC; KC774425\_LHBs\_P-RF-DC; DQ478892\_LHBs\_P-RF-DC; JX036328\_LHBs\_P-RF-CD; EU835240\_LHBs\_P-RF-GC; AY862864\_LHBs\_P-RF-DC

**32 Protein sequences are covered at 53 %:**

GQ924645\_LHBs\_P-B; DQ995804\_LHBs\_P-B; AB106884\_LHBs\_P-B; DQ995802\_LHBs\_P-B; AY206373\_LHBs\_P-B; DQ993684\_LHBs\_P-B; DQ463791\_LHBs\_P-B; JN604212\_LHBs\_P-B; KP406185\_LHBs\_P-B; KP406184\_LHBs\_P-B; KP406183\_LHBs\_P-B; KP406181\_LHBs\_P-B; KP406178\_LHBs\_P-B; KP406177\_LHBs\_P-B; KC792881\_LHBs\_P-B; KP406172\_LHBs\_P-B; JQ429081\_LHBs\_P-B; AB112065\_LHBs\_P-C; FJ787466\_LHBs\_P-C; JQ801477\_LHBs\_P-RF-BC; KF873521\_LHBs\_P-RF-BC; KX660684\_LHBs\_P-RF-DC; KC774423\_LHBs\_P-RF-DC; KC774471\_LHBs\_P-RF-DC; KC774478\_LHBs\_P-RF-DC; KC774480\_LHBs\_P-RF-DC; JX036329\_LHBs\_P-RF-CD; JX036358\_LHBs\_P-RF-DC; FJ562229\_LHBs\_P-RF-CB; FJ023665\_LHBs\_P-RF-GC; FJ023668\_LHBs\_P-RF-GC; FJ023673\_LHBs\_P-RF-GC





**59 Protein sequences are covered at 52 %:**

GQ924617\_LHBs\_P-B; GQ358148\_LHBs\_P-B; JQ707747\_LHBs\_P-B; JQ707764\_LHBs\_P-B; EU939637\_LHBs\_P-B; GQ377644\_LHBs\_P-B; KC793163\_LHBs\_P-B; KC793086\_LHBs\_P-B; KC793182\_LHBs\_P-B; KC793156\_LHBs\_P-B; KX276993\_LHBs\_P-C; JX036326\_LHBs\_P-C; KC875267\_LHBs\_P-C; DQ089773\_LHBs\_P-C; KJ803818\_LHBs\_P-C; GQ358153\_LHBs\_P-C; D28880\_LHBs\_P-C; S75184\_LHBs\_P-C; AB106895\_LHBs\_P-C; AB367416\_LHBs\_P-C; AB367803\_LHBs\_P-C; KX276992\_LHBs\_P-C; KC792656\_LHBs\_P-C; KF873524\_LHBs\_P-RF-CB; AY817513\_LHBs\_P-RF-DC; HM750145\_LHBs\_P-RF-DC; AY817509\_LHBs\_P-RF-DC; KT991423\_LHBs\_P-RF-DC; KC774485\_LHBs\_P-RF-DC; AY817511\_LHBs\_P-RF-DC; HM750147\_LHBs\_P-RF-DC; HM750150\_LHBs\_P-RF-DC; KC774487\_LHBs\_P-RF-DC; KC774498\_LHBs\_P-RF-DC; KC774492\_LHBs\_P-RF-DC; KC774494\_LHBs\_P-RF-DC; AY862865\_LHBs\_P-RF-DC; KC774470\_LHBs\_P-RF-DC; JF491456\_LHBs\_P-RF-DC; KC774489\_LHBs\_P-RF-DC; KC774484\_LHBs\_P-RF-DC; DQ478898\_LHBs\_P-RF-DC; KC774495\_LHBs\_P-RF-DC; KC774474\_LHBs\_P-RF-DC; KC774420\_LHBs\_P-RF-DC; KC774466\_LHBs\_P-RF-DC; KU519423\_LHBs\_P-RF-DC; AY800249\_LHBs\_P-RF-DC; EU787434\_LHBs\_P-RF-DC; KC774422\_LHBs\_P-RF-DC; KC774426\_LHBs\_P-RF-DC; KC774457\_LHBs\_P-RF-DC; KC774475\_LHBs\_P-RF-DC; KC774499\_LHBs\_P-RF-DC; JF436919\_LHBs\_P-RF-CB; KF917451\_LHBs\_P-RF-DC; KP148441\_LHBs\_P-RF-GC; FJ882612\_LHBs\_P-RF-GC; FJ882618\_LHBs\_P-RF-GC

**16 Protein sequences are covered at 51 %:**

FN545833\_LHBs\_P-A; KF053191\_LHBs\_P-B; KJ803786\_LHBs\_P-B; EU939670\_LHBs\_P-B; AB287316\_LHBs\_P-B; EU579441\_LHBs\_P-B; KP148416\_LHBs\_P-B; KP148414\_LHBs\_P-B; KP148438\_LHBs\_P-B; KF873526\_LHBs\_P-C; DQ089803\_LHBs\_P-C; AB014363\_LHBs\_P-C; KF873527\_LHBs\_P-RF-CB; JX504540\_LHBs\_P-RF-CB; KF053166\_LHBs\_P-RF-BC; KJ803827\_LHBs\_P-RF-BC

**44 Protein sequences are covered at 50 %:**

JF439744\_LHBs\_P-A; JF439734\_LHBs\_P-A; AP011094\_LHBs\_P-B; AB493833\_LHBs\_P-B; GQ924621\_LHBs\_P-B; AB642101\_LHBs\_P-B; AB555499\_LHBs\_P-B; JF436921\_LHBs\_P-B; GQ924641\_LHBs\_P-B; EF494381\_LHBs\_P-B; FJ787477\_LHBs\_P-B; AF121251\_LHBs\_P-B; EU330998\_LHBs\_P-B; EU330999\_LHBs\_P-B; EU331000\_LHBs\_P-B; EU331001\_LHBs\_P-B; JX504532\_LHBs\_P-B; JN604149\_LHBs\_P-B; KC792916\_LHBs\_P-B; KJ790200\_LHBs\_P-B; AY206376\_LHBs\_P-C; AY206379\_LHBs\_P-C; KF053168\_LHBs\_P-C; KJ803760\_LHBs\_P-C; KF053164\_LHBs\_P-C; KJ803757\_LHBs\_P-C; FJ032338\_LHBs\_P-C; FJ032339\_LHBs\_P-C; AB112063\_LHBs\_P-C; KF873517\_LHBs\_P-RF-BC; KU679946\_LHBs\_P-RF-BC; AY057948\_LHBs\_P-RF-DC; AY817512\_LHBs\_P-RF-DC; KX660677\_LHBs\_P-RF-DC; KC774490\_LHBs\_P-RF-DC; KC774435\_LHBs\_P-RF-DC; KC774443\_LHBs\_P-RF-DC; KC774455\_LHBs\_P-RF-DC; KP276255\_LHBs\_P-RF-DC; KC774483\_LHBs\_P-RF-DC; KC774447\_LHBs\_P-RF-DC; KC774452\_LHBs\_P-RF-DC; KC774481\_LHBs\_P-RF-DC; EU833891\_LHBs\_P-RF-GC

**9 Protein sequences are covered at 49 %:**

EU330994\_LHBs\_P-B; AB241117\_LHBs\_P-B; AB219429\_LHBs\_P-B; KP148419\_LHBs\_P-B; KP148427\_LHBs\_P-B; KP148440\_LHBs\_P-B; FJ386674\_LHBs\_P-RF-BC; DQ478886\_LHBs\_P-RF-DC; EF103284\_LHBs\_P-RF-AD

**26 Protein sequences are covered at 48 %:**

KP148459\_LHBs\_P-B; JQ707767\_LHBs\_P-B; AB073851\_LHBs\_P-B; AB014366\_LHBs\_P-B; D50521\_LHBs\_P-B; KX276996\_LHBs\_P-B; KP148426\_LHBs\_P-B; KP148406\_LHBs\_P-B; KC793150\_LHBs\_P-B; KC792728\_LHBs\_P-B; KF873511\_LHBs\_P-RF-CB; JF491448\_LHBs\_P-RF-DC; KC774479\_LHBs\_P-RF-DC; KT991417\_LHBs\_P-RF-DC; KC774458\_LHBs\_P-RF-DC; KC774442\_LHBs\_P-RF-DC; AY817515\_LHBs\_P-RF-DC; KC774486\_LHBs\_P-RF-DC; KC774448\_LHBs\_P-RF-DC; JF491451\_LHBs\_P-RF-DC; KP148450\_LHBs\_P-RF-GC; KP148442\_LHBs\_P-RF-BC; FJ023667\_LHBs\_P-RF-GC; AF297619\_LHBs\_P-RF-DA; KC012653\_LHBs\_P-RF-AD; EU185780\_LHBs\_P-RF-AD

**39 Protein sequences are covered at 47 %:**



KJ717840\_LHBs\_P-B; KJ803824\_LHBs\_P-B; EF473976\_LHBs\_P-B; KP148457\_LHBs\_P-B;  
KC792998\_LHBs\_P-B; KC792943\_LHBs\_P-B; JQ801491\_LHBs\_P-C; FJ032336\_LHBs\_P-C;  
DQ207798\_LHBs\_P-G; JQ707436\_LHBs\_P-G; AB056515\_LHBs\_P-G; AF160501\_LHBs\_C-G;  
AB064312\_LHBs\_P-G; AB064311\_LHBs\_P-G; AB056513\_LHBs\_P-G; AB064313\_LHBs\_C-G;  
AB375165\_LHBs\_P-G; AB375166\_LHBs\_P-G; AB375167\_LHBs\_P-G; AB375168\_LHBs\_P-G;  
AB375169\_LHBs\_P-G; AB375170\_LHBs\_P-G; AF405706\_LHBs\_P-G; EF634480\_LHBs\_P-G;  
GU563556\_LHBs\_P-G; HE981174\_LHBs\_P-G; HE981175\_LHBs\_P-G; HE981176\_LHBs\_P-G;  
KF767450\_LHBs\_P-G; KF779233\_LHBs\_P-G; KF779235\_LHBs\_P-G; KF779267\_LHBs\_P-G;  
KJ194508\_LHBs\_P-G; KX264500\_LHBs\_P-G; KT991419\_LHBs\_P-RF-DC; FJ562263\_LHBs\_P-RF-DC;  
KC774461\_LHBs\_P-RF-DC; EU787435\_LHBs\_P-RF-DC; JQ272886\_LHBs\_P-RF-GF

**19 Protein sequences are covered at 46 %:**

KP148433\_LHBs\_P-B; KP148407\_LHBs\_P-B; KF873541\_LHBs\_P-C; FJ386601\_LHBs\_P-C;  
EU939659\_LHBs\_P-C; KF873533\_LHBs\_P-RF-CB; KF873532\_LHBs\_P-RF-CB; KU679939\_LHBs\_P-RF-CB;  
KF873543\_LHBs\_P-RF-CB; KF873542\_LHBs\_P-RF-CB; KF873538\_LHBs\_P-RF-CB; KU679942\_LHBs\_P-  
RF-CB; JX036359\_LHBs\_P-RF-DC; AY817510\_LHBs\_P-RF-DC; KT991420\_LHBs\_P-RF-DC;  
AB674504\_LHBs\_P-RF-DC; KJ586803\_LHBs\_P-RF-AF; AY236161\_LHBs\_P-RF-DA; JQ272887\_LHBs\_P-  
RF-GF

**9 Protein sequences are covered at 45 %:**

EU570075\_LHBs\_P-B; KX276828\_LHBs\_P-B; KJ410511\_LHBs\_P-C; AB074047\_LHBs\_P-C;  
AB674420\_LHBs\_P-D; JQ707678\_LHBs\_P-G; JQ707677\_LHBs\_P-G; JQ707679\_LHBs\_P-G;  
KR230749\_LHBs\_P-G

**13 Protein sequences are covered at 44 %:**

AB302095\_LHBs\_P-B; KX276980\_LHBs\_P-C; KJ717799\_LHBs\_P-C; KJ803790\_LHBs\_P-C;  
JF439781\_LHBs\_P-G; JF439782\_LHBs\_P-G; JF439786\_LHBs\_P-G; JF439791\_LHBs\_P-G;  
JN604208\_LHBs\_P-G; AB064310\_LHBs\_P-G; FJ882610\_LHBs\_P-RF-GC; FJ882614\_LHBs\_P-RF-GC;  
FJ882613\_LHBs\_P-RF-GC

**7 Protein sequences are covered at 43 %:**

KX276962\_LHBs\_P-B; KF767451\_LHBs\_P-G; EF464097\_LHBs\_P-G; GU565217\_LHBs\_P-G;  
KF414679\_LHBs\_P-G; KJ803822\_LHBs\_P-RF-CB; EF103283\_LHBs\_P-RF-AD

**7 Protein sequences are covered at 42 %:**

JQ801472\_LHBs\_P-C; X65258\_LHBs\_P-D; KF779357\_LHBs\_P-G; JF439784\_LHBs\_P-G;  
JF439779\_LHBs\_P-G; JF439789\_LHBs\_P-G; KF873534\_LHBs\_P-RF-CB

**20 Protein sequences are covered at 41 %:**

KC792712\_LHBs\_P-B; AB188244\_LHBs\_P-D; AB274970\_LHBs\_P-E; KF849715\_LHBs\_P-E;  
EF464098\_LHBs\_P-G; JF439787\_LHBs\_P-G; JQ707671\_LHBs\_P-G; JQ707657\_LHBs\_P-G;  
JQ707660\_LHBs\_P-G; JQ707666\_LHBs\_P-G; JQ707668\_LHBs\_P-G; JQ707673\_LHBs\_P-G;  
JQ707680\_LHBs\_P-G; JF439792\_LHBs\_P-G; JF439793\_LHBs\_P-G; JF439780\_LHBs\_P-G;  
JF439785\_LHBs\_P-G; HE981179\_LHBs\_P-RF-FG; KT991427\_LHBs\_P-RF-DC; KT991424\_LHBs\_P-RF-DC

**7 Protein sequences are covered at 39 %:**

KF053178\_LHBs\_P-D; JN642159\_LHBs\_P-D; AB090268\_LHBs\_P-D; AB120308\_LHBs\_P-D;  
JF439788\_LHBs\_P-G; FJ904441\_LHBs\_P-RF-DE; KJ803771\_LHBs\_P-RF-DB

**6 Protein sequences are covered at 38 %:**

FJ032344\_LHBs\_P-B; HM363590\_LHBs\_P-E; HM363588\_LHBs\_P-E; HM363589\_LHBs\_P-E;  
EU939620\_LHBs\_P-RF-CB; KC774449\_LHBs\_P-RF-DC

**8 Protein sequences are covered at 37 %:**

KU679947\_LHBs\_P-C; JN370954\_LHBs\_P-D; KJ647353\_LHBs\_P-D; KF170785\_LHBs\_P-E;  
GQ161773\_LHBs\_P-E; GQ161802\_LHBs\_P-E; DQ478890\_LHBs\_P-RF-DC; AF297620\_LHBs\_P-RF-DA

**13 Protein sequences are covered at 36 %:**

KF873516\_LHBs\_P-C; KM108593\_LHBs\_P-D; AB274977\_LHBs\_P-E; EU239223\_LHBs\_P-E;



EU239218\_LHBs\_P-E; GQ161816\_LHBs\_P-E; AB915177\_LHBs\_P-E; AM494707\_LHBs\_P-E;  
FJ349226\_LHBs\_P-E; HM363597\_LHBs\_P-E; JN664935\_LHBs\_P-RF-DC; FN594771\_LHBs\_P-RF-DE;  
GQ161754\_LHBs\_P-RF-DE

**19 Protein sequences are covered at 35 %:**

AB119251\_LHBs\_P-D; AB119252\_LHBs\_P-D; AB119253\_LHBs\_P-D; JN664918\_LHBs\_P-D;  
JX090689\_LHBs\_P-D; EU787443\_LHBs\_P-D; JX090619\_LHBs\_P-D; JN664922\_LHBs\_P-D;  
AJ627215\_LHBs\_P-D; AJ627218\_LHBs\_P-D; AM494705\_LHBs\_P-E; AB201288\_LHBs\_P-E;  
EU239219\_LHBs\_P-E; HM363566\_LHBs\_P-E; HM363580\_LHBs\_P-E; X68292\_LHBs\_P-RF-DA;  
AB330368\_LHBs\_P-RF-DA; JN642160\_LHBs\_P-RF-DE; FJ904400\_LHBs\_P-RF-DE

**8 Protein sequences are covered at 34 %:**

GU456657\_LHBs\_P-D; KF471642\_LHBs\_P-D; KM577669\_LHBs\_P-D; KF849721\_LHBs\_P-E;  
HM363581\_LHBs\_P-E; HM363579\_LHBs\_P-E; JX036330\_LHBs\_P-RF-DC; KP288875\_LHBs\_P-RF-DE

**25 Protein sequences are covered at 33 %:**

JN664932\_LHBs\_P-D; JX090688\_LHBs\_P-D; JN642153\_LHBs\_P-D; JX090670\_LHBs\_P-D;  
EU594422\_LHBs\_P-D; AB274980\_LHBs\_P-E; AB091256\_LHBs\_P-E; JF439803\_LHBs\_P-G;  
JF439804\_LHBs\_P-G; JF439805\_LHBs\_P-G; JF439806\_LHBs\_P-G; JF439807\_LHBs\_P-G;  
JF439808\_LHBs\_P-G; JF439809\_LHBs\_P-G; JF439810\_LHBs\_P-G; JF439811\_LHBs\_P-G;  
JF439812\_LHBs\_P-G; JF439813\_LHBs\_P-G; JF439814\_LHBs\_P-G; JF439815\_LHBs\_P-G;  
JF439816\_LHBs\_P-G; JF439817\_LHBs\_P-G; JF439818\_LHBs\_P-G; GU177079\_LHBs\_P-RF-DE;  
KX357641\_LHBs\_P-RF-DE

**320 Protein sequences are covered at 32 %:**

AB078032\_LHBs\_P-D; AB078031\_LHBs\_P-D; AB078033\_LHBs\_P-D; AB267090\_LHBs\_P-D;  
AB109478\_LHBs\_P-D; KF471655\_LHBs\_P-D; JN642144\_LHBs\_P-D; AB109476\_LHBs\_P-D;  
AB109477\_LHBs\_P-D; AB109479\_LHBs\_P-D; AB110075\_LHBs\_P-D; AB119254\_LHBs\_P-D;  
AB205126\_LHBs\_P-D; AB210821\_LHBs\_P-D; AB210822\_LHBs\_P-D; AB471856\_LHBs\_P-D;  
AB471857\_LHBs\_P-D; AB109475\_LHBs\_P-D; AF043594\_LHBs\_P-D; KX357639\_LHBs\_P-D;  
KM524341\_LHBs\_P-D; JN040767\_LHBs\_P-D; JF754612\_LHBs\_P-D; GU456659\_LHBs\_P-D;  
AB674405\_LHBs\_P-D; JN664930\_LHBs\_P-D; JN040799\_LHBs\_P-D; FJ349218\_LHBs\_P-D;  
JQ707517\_LHBs\_P-D; JQ707515\_LHBs\_P-D; JQ707513\_LHBs\_P-D; JF754609\_LHBs\_P-D;  
GU456655\_LHBs\_P-D; EU594401\_LHBs\_P-D; KP165604\_LHBs\_P-D; KM524354\_LHBs\_P-D;  
JX090656\_LHBs\_P-D; JN040765\_LHBs\_P-D; HQ700458\_LHBs\_P-D; GU456658\_LHBs\_P-D;  
GQ183476\_LHBs\_P-D; KC875292\_LHBs\_P-D; KC875290\_LHBs\_P-D; JX090682\_LHBs\_P-D;  
JN792905\_LHBs\_P-D; KT962022\_LHBs\_P-D; KP202944\_LHBs\_P-D; KP202942\_LHBs\_P-D;  
KP202941\_LHBs\_P-D; KP184498\_LHBs\_P-D; KP184497\_LHBs\_P-D; KP184496\_LHBs\_P-D;  
KP184495\_LHBs\_P-D; KM524355\_LHBs\_P-D; JX096958\_LHBs\_P-D; JQ707530\_LHBs\_P-D;  
JQ707528\_LHBs\_P-D; JQ707527\_LHBs\_P-D; JQ707526\_LHBs\_P-D; JQ707525\_LHBs\_P-D;  
JQ707524\_LHBs\_P-D; JQ707523\_LHBs\_P-D; JQ707522\_LHBs\_P-D; JQ707521\_LHBs\_P-D;  
JQ707520\_LHBs\_P-D; JQ707519\_LHBs\_P-D; JQ707518\_LHBs\_P-D; JQ707516\_LHBs\_P-D;  
JQ707514\_LHBs\_P-D; JQ707512\_LHBs\_P-D; JQ707493\_LHBs\_P-D; JQ707486\_LHBs\_P-D;  
JQ707483\_LHBs\_P-D; JN688679\_LHBs\_P-D; JN040802\_LHBs\_P-D; GQ477453\_LHBs\_P-D;  
GQ183474\_LHBs\_P-D; GQ183473\_LHBs\_P-D; GQ183471\_LHBs\_P-D; EU594432\_LHBs\_P-D;  
EU594431\_LHBs\_P-D; EU594429\_LHBs\_P-D; EU594417\_LHBs\_P-D; EU594416\_LHBs\_P-D;  
EU594400\_LHBs\_P-D; KX827290\_LHBs\_P-D; KU668433\_LHBs\_P-D; KT962024\_LHBs\_P-D;  
KT962023\_LHBs\_P-D; KT962021\_LHBs\_P-D; KP202943\_LHBs\_P-D; KP202940\_LHBs\_P-D;  
KP202939\_LHBs\_P-D; KP202938\_LHBs\_P-D; KP202937\_LHBs\_P-D; KP184499\_LHBs\_P-D;  
KM524351\_LHBs\_P-D; KM524346\_LHBs\_P-D; KF679997\_LHBs\_P-D; KC875305\_LHBs\_P-D;  
JX090673\_LHBs\_P-D; JX090663\_LHBs\_P-D; JN688708\_LHBs\_P-D; JN688683\_LHBs\_P-D;  
JN604174\_LHBs\_P-D; HQ700513\_LHBs\_P-D; GQ183483\_LHBs\_P-D; GQ183482\_LHBs\_P-D;  
GQ183477\_LHBs\_P-D; KX357637\_LHBs\_P-D; KC875324\_LHBs\_P-D; KC875308\_LHBs\_P-D;



KC875306\_LHBs\_P-D; KC875294\_LHBs\_P-D; KC875293\_LHBs\_P-D; JX090686\_LHBs\_P-D;  
JX090685\_LHBs\_P-D; JX090617\_LHBs\_P-D; JN792911\_LHBs\_P-D; Z35716\_LHBs\_P-D;  
KX827301\_LHBs\_P-D; KR905424\_LHBs\_P-D; KP230541\_LHBs\_P-D; KP202945\_LHBs\_P-D;  
KP165605\_LHBs\_P-D; KP165602\_LHBs\_P-D; KP165601\_LHBs\_P-D; KP165598\_LHBs\_P-D;  
KP143745\_LHBs\_P-D; KM524353\_LHBs\_P-D; KM524352\_LHBs\_P-D; KF679996\_LHBs\_P-D;  
KF170766\_LHBs\_P-D; KC875332\_LHBs\_P-D; KC875312\_LHBs\_P-D; KC875309\_LHBs\_P-D;  
KC875297\_LHBs\_P-D; JX090717\_LHBs\_P-D; JX090711\_LHBs\_P-D; JX090678\_LHBs\_P-D;  
JX090675\_LHBs\_P-D; JQ707497\_LHBs\_P-D; JF754593\_LHBs\_P-D; GQ477452\_LHBs\_P-D;  
GQ183475\_LHBs\_P-D; FJ904426\_LHBs\_P-D; FJ692532\_LHBs\_P-D; EU594428\_LHBs\_P-D;  
EU594427\_LHBs\_P-D; EU594424\_LHBs\_P-D; EU594421\_LHBs\_P-D; EU594415\_LHBs\_P-D;  
EU594414\_LHBs\_P-D; EU594413\_LHBs\_P-D; EU594407\_LHBs\_P-D; EU594403\_LHBs\_P-D;  
KP165603\_LHBs\_P-D; KP165600\_LHBs\_P-D; KM524344\_LHBs\_P-D; KM108605\_LHBs\_P-D;  
JX096954\_LHBs\_P-D; JX090716\_LHBs\_P-D; JX090702\_LHBs\_P-D; JX090694\_LHBs\_P-D;  
JN792908\_LHBs\_P-D; JN664936\_LHBs\_P-D; JN040781\_LHBs\_P-D; HQ700514\_LHBs\_P-D;  
FJ904439\_LHBs\_P-D; EU594433\_LHBs\_P-D; EU594426\_LHBs\_P-D; X97849\_LHBs\_P-D;  
X72702\_LHBs\_P-D; KX357638\_LHBs\_P-D; KU736925\_LHBs\_P-D; KR905423\_LHBs\_P-D;  
KP322601\_LHBs\_P-D; KF679995\_LHBs\_P-D; JX096957\_LHBs\_P-D; JX090718\_LHBs\_P-D;  
JX090713\_LHBs\_P-D; JX090699\_LHBs\_P-D; JX090696\_LHBs\_P-D; JX090679\_LHBs\_P-D;  
JN604295\_LHBs\_P-D; HQ700512\_LHBs\_P-D; HQ700510\_LHBs\_P-D; FJ349208\_LHBs\_P-D;  
FJ349205\_LHBs\_P-D; EU594430\_LHBs\_P-D; EU594418\_LHBs\_P-D; EU594399\_LHBs\_P-D;  
KT962025\_LHBs\_P-D; KP143744\_LHBs\_P-D; JX096956\_LHBs\_P-D; EU594423\_LHBs\_P-D;  
EU594420\_LHBs\_P-D; EU594419\_LHBs\_P-D; X97848\_LHBs\_P-D; JN792910\_LHBs\_P-D;  
JN792909\_LHBs\_P-D; JN792907\_LHBs\_P-D; JN792904\_LHBs\_P-D; JN792903\_LHBs\_P-D;  
AY796031\_LHBs\_P-D; AM422939\_LHBs\_P-D; AY233296\_LHBs\_P-D; EU414139\_LHBs\_P-D;  
AB330369\_LHBs\_P-D; AB330370\_LHBs\_P-D; AB106564\_LHBs\_C-E; AB201287\_LHBs\_P-E;  
HM363610\_LHBs\_P-E; AB205129\_LHBs\_P-E; AB205192\_LHBs\_P-E; FJ349239\_LHBs\_P-E;  
AY739675\_LHBs\_P-E; AB194947\_LHBs\_P-E; AY739674\_LHBs\_P-E; GQ161759\_LHBs\_P-E;  
GQ161778\_LHBs\_P-E; GQ161790\_LHBs\_P-E; GQ161799\_LHBs\_P-E; GQ161805\_LHBs\_P-E;  
GQ161818\_LHBs\_P-E; GQ161782\_LHBs\_P-E; GQ161792\_LHBs\_P-E; GQ161812\_LHBs\_P-E;  
GQ161814\_LHBs\_P-E; GQ161811\_LHBs\_P-E; HM363601\_LHBs\_P-E; GQ161815\_LHBs\_P-E;  
GQ161807\_LHBs\_P-E; GQ161770\_LHBs\_P-E; GQ161761\_LHBs\_P-E; AB274969\_LHBs\_P-E;  
AB274971\_LHBs\_P-E; DQ060830\_LHBs\_P-E; GQ161819\_LHBs\_P-E; GQ161808\_LHBs\_P-E;  
GQ161804\_LHBs\_P-E; GQ161800\_LHBs\_P-E; GQ161798\_LHBs\_P-E; GQ161794\_LHBs\_P-E;  
GQ161793\_LHBs\_P-E; GQ161791\_LHBs\_P-E; GQ161789\_LHBs\_P-E; GQ161787\_LHBs\_P-E;  
GQ161786\_LHBs\_P-E; GQ161784\_LHBs\_P-E; GQ161781\_LHBs\_P-E; GQ161780\_LHBs\_P-E;  
GQ161779\_LHBs\_P-E; GQ161777\_LHBs\_P-E; GQ161776\_LHBs\_P-E; GQ161772\_LHBs\_P-E;  
GQ161771\_LHBs\_P-E; GQ161769\_LHBs\_P-E; GQ161765\_LHBs\_P-E; GQ161763\_LHBs\_P-E;  
EU239217\_LHBs\_P-E; AB205191\_LHBs\_P-E; AB205189\_LHBs\_P-E; HM363604\_LHBs\_P-E;  
FJ349237\_LHBs\_P-E; FJ349238\_LHBs\_P-E; AB274976\_LHBs\_P-E; HQ700552\_LHBs\_P-E;  
HQ700550\_LHBs\_P-E; HM363594\_LHBs\_P-E; GQ161821\_LHBs\_P-E; HM363591\_LHBs\_P-E;  
KX186584\_LHBs\_P-E; KU736896\_LHBs\_P-E; KU736895\_LHBs\_P-E; KU736894\_LHBs\_P-E;  
HM363592\_LHBs\_P-E; HM363587\_LHBs\_P-E; HM363582\_LHBs\_P-E; HM363575\_LHBs\_P-E;  
HM363574\_LHBs\_P-E; HM363568\_LHBs\_P-E; GQ161833\_LHBs\_P-E; GQ161832\_LHBs\_P-E;  
GQ161830\_LHBs\_P-E; GQ161829\_LHBs\_P-E; GQ161828\_LHBs\_P-E; GQ161827\_LHBs\_P-E;  
FJ904405\_LHBs\_P-RF-DE; KX357630\_LHBs\_P-RF-DE; KX357626\_LHBs\_P-RF-DE; AB270538\_LHBs\_P-  
RF-DE; JN642141\_LHBs\_P-RF-DE; JN642127\_LHBs\_P-RF-DE; HQ700525\_LHBs\_P-RF-DE;  
HQ700524\_LHBs\_P-RF-DE; AB033559\_LHBs\_P-RF-DE; KX357628\_LHBs\_P-RF-DE; KM577664\_LHBs\_P-  
RF-DE; HQ700584\_LHBs\_P-RF-DE; HQ700583\_LHBs\_P-RF-DE; HQ700581\_LHBs\_P-RF-DE;  
HQ700541\_LHBs\_P-RF-DE; HQ700533\_LHBs\_P-RF-DE; HQ700503\_LHBs\_P-RF-DE;



HQ700501\_LHBs\_P-RF-DE; HQ700497\_LHBs\_P-RF-DE; FJ904407\_LHBs\_P-RF-DE; KR905422\_LHBs\_P-RF-DE; JN688717\_LHBs\_P-RF-DE; KU736923\_LHBs\_P-RF-DE; KU736922\_LHBs\_P-RF-DE; KU736921\_LHBs\_P-RF-DE; KP322604\_LHBs\_P-RF-DE; KP168418\_LHBs\_P-RF-DE; KP168417\_LHBs\_P-RF-DE; KM577663\_LHBs\_P-RF-DE; AY233293\_LHBs\_P-RF-DE; JQ687532\_LHBs\_P-RF-DE; EU594406\_LHBs\_P-RF-DE

**73 Protein sequences are covered at 31 %:**

AB555500\_LHBs\_P-D; EF103276\_LHBs\_P-D; AB188242\_LHBs\_P-D; AB104710\_LHBs\_P-D; JN604259\_LHBs\_P-D; GQ205389\_LHBs\_P-D; GU456666\_LHBs\_P-D; JN642146\_LHBs\_P-D; JX090624\_LHBs\_P-D; GU456664\_LHBs\_P-D; KC875328\_LHBs\_P-D; KC875323\_LHBs\_P-D; KC875322\_LHBs\_P-D; KC875289\_LHBs\_P-D; JQ707529\_LHBs\_P-D; GQ477456\_LHBs\_P-D; EU594402\_LHBs\_P-D; KC875329\_LHBs\_P-D; KC875296\_LHBs\_P-D; KC875288\_LHBs\_P-D; FJ904410\_LHBs\_P-D; KC875310\_LHBs\_P-D; JN040774\_LHBs\_P-D; KC875299\_LHBs\_P-D; JX090676\_LHBs\_P-D; KP168419\_LHBs\_P-D; AY233292\_LHBs\_P-D; AB210820\_LHBs\_P-D; AB188241\_LHBs\_P-D; DQ060824\_LHBs\_P-E; FN594763\_LHBs\_P-E; GQ161755\_LHBs\_P-E; GQ161835\_LHBs\_P-E; KU736899\_LHBs\_P-E; AB201289\_LHBs\_P-E; AB201290\_LHBs\_P-E; DQ060823\_LHBs\_P-E; DQ060825\_LHBs\_P-E; DQ060826\_LHBs\_P-E; DQ060827\_LHBs\_P-E; DQ060828\_LHBs\_P-E; DQ060829\_LHBs\_P-E; HM363565\_LHBs\_P-E; FN545841\_LHBs\_P-E; AB274981\_LHBs\_P-E; KF849724\_LHBs\_P-E; KF849716\_LHBs\_P-E; KF849713\_LHBs\_P-E; HM363595\_LHBs\_P-E; KU736898\_LHBs\_P-E; KU736897\_LHBs\_P-E; KT192626\_LHBs\_P-E; KR139749\_LHBs\_P-E; KF922439\_LHBs\_P-E; KF922438\_LHBs\_P-E; KF849722\_LHBs\_P-E; KF849719\_LHBs\_P-E; KF849714\_LHBs\_P-E; KF170741\_LHBs\_P-E; HM363606\_LHBs\_P-E; HM363573\_LHBs\_P-E; KC774450\_LHBs\_P-RF-DE; DQ315779\_LHBs\_P-RF-DE; FJ904440\_LHBs\_P-RF-DE; AY341335\_LHBs\_P-RF-DE; KU736916\_LHBs\_P-RF-DE; JN642139\_LHBs\_P-RF-DE; KF471643\_LHBs\_P-RF-DE; FJ904409\_LHBs\_P-RF-DE; FJ904404\_LHBs\_P-RF-DE; FJ904408\_LHBs\_P-RF-DE; X80925\_LHBs\_P-RF-DE; KM606750\_LHBs\_P-RF-DE

**94 Protein sequences are covered at 30 %:**

DQ399006\_LHBs\_P-D; JN642154\_LHBs\_P-D; AB119255\_LHBs\_P-D; AB090270\_LHBs\_P-D; KM108596\_LHBs\_P-D; JN642163\_LHBs\_P-D; JF754629\_LHBs\_P-D; GU456673\_LHBs\_P-D; JN642143\_LHBs\_P-D; GU456656\_LHBs\_P-D; HQ833465\_LHBs\_P-D; GU456649\_LHBs\_P-D; GQ183479\_LHBs\_P-D; JN792906\_LHBs\_P-D; JN664919\_LHBs\_P-D; JQ707480\_LHBs\_P-D; JN642142\_LHBs\_P-D; JN040819\_LHBs\_P-D; KF471647\_LHBs\_P-D; KM577671\_LHBs\_P-D; JQ707508\_LHBs\_P-D; JQ707507\_LHBs\_P-D; JQ707505\_LHBs\_P-D; JQ707503\_LHBs\_P-D; JQ707502\_LHBs\_P-D; JQ707500\_LHBs\_P-D; JQ707499\_LHBs\_P-D; JQ707496\_LHBs\_P-D; JQ707494\_LHBs\_P-D; JQ707490\_LHBs\_P-D; JQ707489\_LHBs\_P-D; JQ707488\_LHBs\_P-D; JQ707487\_LHBs\_P-D; JQ707485\_LHBs\_P-D; JQ707482\_LHBs\_P-D; JQ707481\_LHBs\_P-D; JQ707479\_LHBs\_P-D; JQ707478\_LHBs\_P-D; JQ707476\_LHBs\_P-D; KM606745\_LHBs\_P-D; JN257163\_LHBs\_P-D; KF679998\_LHBs\_P-D; JX090683\_LHBs\_P-D; GQ477457\_LHBs\_P-D; KF779220\_LHBs\_P-D; JN040827\_LHBs\_P-D; GQ183472\_LHBs\_P-D; AY233294\_LHBs\_P-D; AB205127\_LHBs\_P-D; FN594750\_LHBs\_P-E; EU239222\_LHBs\_P-E; AM494713\_LHBs\_P-E; AM494704\_LHBs\_P-E; AB274974\_LHBs\_P-E; AM494690\_LHBs\_P-E; AM494693\_LHBs\_P-E; AM494701\_LHBs\_P-E; AM494702\_LHBs\_P-E; AM494708\_LHBs\_P-E; AM494709\_LHBs\_P-E; AM494715\_LHBs\_P-E; AM494717\_LHBs\_P-E; KM108623\_LHBs\_P-E; KF849723\_LHBs\_P-E; AB194948\_LHBs\_P-E; KF849717\_LHBs\_P-E; AM494710\_LHBs\_P-E; X75657\_LHBs\_P-E; KU736901\_LHBs\_P-E; KU736893\_LHBs\_P-E; KU736910\_LHBs\_P-E; KU736908\_LHBs\_P-E; KU736907\_LHBs\_P-E; KU736906\_LHBs\_P-E; KU736905\_LHBs\_P-E; KU736904\_LHBs\_P-E; KU736903\_LHBs\_P-E; KU736902\_LHBs\_P-E; KU736900\_LHBs\_P-E; KU736891\_LHBs\_P-E; KF170789\_LHBs\_P-E; KF170788\_LHBs\_P-E; HM363571\_LHBs\_P-E; HM363570\_LHBs\_P-E; HM363569\_LHBs\_P-E; FJ904403\_LHBs\_P-RF-DE; FJ904444\_LHBs\_P-RF-DE; HQ700500\_LHBs\_P-RF-DE; AB188245\_LHBs\_P-RF-DE; JN642152\_LHBs\_P-RF-DE; HQ700540\_LHBs\_P-RF-DE; FJ904417\_LHBs\_P-





RF-DE; FJ904416\_LHBs\_P-RF-DE; AB048703\_LHBs\_P-RF-DE

**43 Protein sequences are covered at 29 %:**

AB115417\_LHBs\_P-C; KM108595\_LHBs\_P-D; JN040753\_LHBs\_P-D; KM108592\_LHBs\_P-D;  
KC875340\_LHBs\_P-D; AB555501\_LHBs\_P-D; GU456674\_LHBs\_P-D; KJ470894\_LHBs\_P-D;  
JN642132\_LHBs\_P-D; JF754619\_LHBs\_P-D; KM524358\_LHBs\_P-D; KF779376\_LHBs\_P-D;  
KF779341\_LHBs\_P-D; JX090672\_LHBs\_P-D; GU456680\_LHBs\_P-D; JX310729\_LHBs\_P-D;  
KU668449\_LHBs\_P-D; KM524361\_LHBs\_P-D; JN664938\_LHBs\_P-D; JN664921\_LHBs\_P-D;  
EU594404\_LHBs\_P-D; JN664927\_LHBs\_P-D; EU594405\_LHBs\_P-D; JX090625\_LHBs\_P-D;  
DQ464182\_LHBs\_P-D; EU239224\_LHBs\_P-E; AM494700\_LHBs\_P-E; AM494696\_LHBs\_P-E;  
AB274982\_LHBs\_P-E; KF170784\_LHBs\_P-E; GQ161801\_LHBs\_P-E; AB091255\_LHBs\_P-E;  
EU239226\_LHBs\_P-E; HM363586\_LHBs\_P-E; HM363577\_LHBs\_P-E; HM363576\_LHBs\_P-E;  
GQ205379\_LHBs\_P-RF-DE; JN664934\_LHBs\_P-RF-DE; KX827299\_LHBs\_P-RF-DE; KJ647349\_LHBs\_P-  
RF-DE; KM359442\_LHBs\_P-RF-DE; KM524357\_LHBs\_P-RF-DE; FJ904406\_LHBs\_P-RF-DE

**368 Protein sequences are covered at 28 %:**

EU498227\_LHBs\_P-C; AB270550\_LHBs\_P-D; AB674406\_LHBs\_P-D; AY090453\_LHBs\_P-D;  
JX090712\_LHBs\_P-D; JN642158\_LHBs\_P-D; JF754626\_LHBs\_P-D; AB555497\_LHBs\_P-D;  
AB126581\_LHBs\_P-D; AB104711\_LHBs\_P-D; JX090610\_LHBs\_P-D; AB222711\_LHBs\_P-D;  
AB246347\_LHBs\_P-D; AY721607\_LHBs\_P-D; EU414136\_LHBs\_P-D; AB104712\_LHBs\_P-D;  
AF121240\_LHBs\_C-D; AF121241\_LHBs\_P-D; AJ627224\_LHBs\_P-D; HQ700444\_LHBs\_P-D;  
GU456684\_LHBs\_P-D; GU456654\_LHBs\_P-D; AY945307\_LHBs\_P-D; AY796032\_LHBs\_P-D;  
AJ627223\_LHBs\_P-D; AB674427\_LHBs\_P-D; AB674407\_LHBs\_P-D; JX090677\_LHBs\_P-D;  
GU456639\_LHBs\_P-D; FJ349219\_LHBs\_P-D; AB270547\_LHBs\_P-D; AB270539\_LHBs\_P-D;  
AB104709\_LHBs\_P-D; AB222713\_LHBs\_P-D; AY661792\_LHBs\_P-D; AY661793\_LHBs\_P-D;  
AY721605\_LHBs\_P-D; AY721606\_LHBs\_P-D; AY721608\_LHBs\_P-D; AY721612\_LHBs\_P-D;  
AY796030\_LHBs\_P-D; AB246348\_LHBs\_P-D; KJ470893\_LHBs\_P-D; KF679990\_LHBs\_P-D;  
KC875342\_LHBs\_P-D; JN664941\_LHBs\_P-D; JN604275\_LHBs\_P-D; GU456675\_LHBs\_P-D;  
GQ922000\_LHBs\_P-D; EF103275\_LHBs\_P-D; AY161158\_LHBs\_P-D; AY161157\_LHBs\_P-D;  
AB583680\_LHBs\_P-D; X80926\_LHBs\_P-D; X80924\_LHBs\_P-D; JN040791\_LHBs\_P-D;  
FJ349235\_LHBs\_P-D; KF476029\_LHBs\_P-D; KC875316\_LHBs\_P-D; KC875285\_LHBs\_P-D;  
KC875279\_LHBs\_P-D; JN642161\_LHBs\_P-D; JN642151\_LHBs\_P-D; JN642135\_LHBs\_P-D;  
JF754603\_LHBs\_P-D; JF754602\_LHBs\_P-D; GQ922003\_LHBs\_P-D; GQ205380\_LHBs\_P-D;  
JN370953\_LHBs\_P-D; JN370952\_LHBs\_P-D; JN370951\_LHBs\_P-D; JN370950\_LHBs\_P-D;  
JN370949\_LHBs\_P-D; KX357622\_LHBs\_P-D; KU668435\_LHBs\_P-D; KR139748\_LHBs\_P-D;  
KF679989\_LHBs\_P-D; KC875331\_LHBs\_P-D; KC875315\_LHBs\_P-D; JX090720\_LHBs\_P-D;  
JX090708\_LHBs\_P-D; JX090667\_LHBs\_P-D; JN688712\_LHBs\_P-D; JN604265\_LHBs\_P-D;  
JN604263\_LHBs\_P-D; JN040814\_LHBs\_P-D; HQ700474\_LHBs\_P-D; GU456668\_LHBs\_P-D;  
GU456667\_LHBs\_P-D; EU787442\_LHBs\_P-D; KM212957\_LHBs\_P-D; KC875301\_LHBs\_P-D;  
KC875295\_LHBs\_P-D; JX090700\_LHBs\_P-D; JQ687531\_LHBs\_P-D; JN642136\_LHBs\_P-D;  
JN040761\_LHBs\_P-D; JN040759\_LHBs\_P-D; JF754628\_LHBs\_P-D; FJ349233\_LHBs\_P-D;  
EU787440\_LHBs\_P-D; EU787437\_LHBs\_P-D; X02496\_LHBs\_P-D; KU668444\_LHBs\_P-D;  
KU668441\_LHBs\_P-D; KT963508\_LHBs\_P-D; KT347090\_LHBs\_P-D; KM108607\_LHBs\_P-D;  
KM108606\_LHBs\_P-D; KM108591\_LHBs\_P-D; KF584161\_LHBs\_P-D; KF476028\_LHBs\_P-D;  
KF170764\_LHBs\_P-D; KF170759\_LHBs\_P-D; KF170757\_LHBs\_P-D; KC875335\_LHBs\_P-D;  
KC875334\_LHBs\_P-D; KC875330\_LHBs\_P-D; KC875321\_LHBs\_P-D; KC875314\_LHBs\_P-D;  
KC875313\_LHBs\_P-D; KC875283\_LHBs\_P-D; JX090621\_LHBs\_P-D; JN664917\_LHBs\_P-D;  
JN642148\_LHBs\_P-D; JN642129\_LHBs\_P-D; JN604278\_LHBs\_P-D; JN040813\_LHBs\_P-D;  
JN040796\_LHBs\_P-D; JN040785\_LHBs\_P-D; JN040783\_LHBs\_P-D; JF754594\_LHBs\_P-D;  
HQ700466\_LHBs\_P-D; HQ700453\_LHBs\_P-D; HM750155\_LHBs\_P-D; GQ477459\_LHBs\_P-D;  
FJ904432\_LHBs\_P-D; FJ386590\_LHBs\_P-D; FJ349229\_LHBs\_P-D; EU787447\_LHBs\_P-D;



EU787446\_LHBs\_P-D; EU594409\_LHBs\_P-D; KX276999\_LHBs\_P-D; KP090181\_LHBs\_P-D;  
KF922432\_LHBs\_P-D; KF779209\_LHBs\_P-D; KF679994\_LHBs\_P-D; KF471658\_LHBs\_P-D;  
KF170747\_LHBs\_P-D; KC875336\_LHBs\_P-D; KC875286\_LHBs\_P-D; JX310728\_LHBs\_P-D;  
JX090705\_LHBs\_P-D; JX090704\_LHBs\_P-D; JX090687\_LHBs\_P-D; JX090684\_LHBs\_P-D;  
JX090665\_LHBs\_P-D; JX090645\_LHBs\_P-D; JX090643\_LHBs\_P-D; JX090642\_LHBs\_P-D;  
JX090638\_LHBs\_P-D; JX090632\_LHBs\_P-D; JX090631\_LHBs\_P-D; JX090630\_LHBs\_P-D;  
JX090626\_LHBs\_P-D; JN664910\_LHBs\_P-D; JN257181\_LHBs\_P-D; JN257151\_LHBs\_P-D;  
JN040792\_LHBs\_P-D; JF754618\_LHBs\_P-D; HQ833470\_LHBs\_P-D; HQ700478\_LHBs\_P-D;  
HM750154\_LHBs\_P-D; GU456681\_LHBs\_P-D; GU456670\_LHBs\_P-D; GU456660\_LHBs\_P-D;  
GU456641\_LHBs\_P-D; FJ904427\_LHBs\_P-D; FJ349232\_LHBs\_P-D; FJ349220\_LHBs\_P-D;  
EU414143\_LHBs\_P-D; KP090180\_LHBs\_P-D; KM524339\_LHBs\_P-D; JX090657\_LHBs\_P-D;  
JX090612\_LHBs\_P-D; JX090608\_LHBs\_P-D; HQ236014\_LHBs\_P-D; HM750151\_LHBs\_P-D;  
GQ183485\_LHBs\_P-D; EU594382\_LHBs\_P-D; Y07587\_LHBs\_P-D; KX827300\_LHBs\_P-D;  
KP322600\_LHBs\_P-D; KP322599\_LHBs\_P-D; KM606753\_LHBs\_P-D; KM606752\_LHBs\_P-D;  
KM524347\_LHBs\_P-D; KM524342\_LHBs\_P-D; KM108600\_LHBs\_P-D; KF471652\_LHBs\_P-D;  
KF471651\_LHBs\_P-D; KF170765\_LHBs\_P-D; KF170758\_LHBs\_P-D; KC875319\_LHBs\_P-D;  
KC875317\_LHBs\_P-D; KC875300\_LHBs\_P-D; KC875280\_LHBs\_P-D; KC875278\_LHBs\_P-D;  
JX090668\_LHBs\_P-D; JX090660\_LHBs\_P-D; JX090655\_LHBs\_P-D; JX090654\_LHBs\_P-D;  
JX090653\_LHBs\_P-D; JX090652\_LHBs\_P-D; JX090651\_LHBs\_P-D; JX090650\_LHBs\_P-D;  
JX090649\_LHBs\_P-D; JX090627\_LHBs\_P-D; JN642167\_LHBs\_P-D; JN642156\_LHBs\_P-D;  
JN642147\_LHBs\_P-D; JN642130\_LHBs\_P-D; JN604206\_LHBs\_P-D; JN257199\_LHBs\_P-D;  
JN257193\_LHBs\_P-D; JN257185\_LHBs\_P-D; JN257182\_LHBs\_P-D; JN257179\_LHBs\_P-D;  
JN257171\_LHBs\_P-D; JN257155\_LHBs\_P-D; JN040829\_LHBs\_P-D; JN040826\_LHBs\_P-D;  
JN040807\_LHBs\_P-D; JN040805\_LHBs\_P-D; JN040794\_LHBs\_P-D; JN040757\_LHBs\_P-D;  
JF754627\_LHBs\_P-D; JF754624\_LHBs\_P-D; JF754607\_LHBs\_P-D; JF754604\_LHBs\_P-D;  
JF754600\_LHBs\_P-D; JF754596\_LHBs\_P-D; JF754595\_LHBs\_P-D; JF754592\_LHBs\_P-D;  
JF754591\_LHBs\_P-D; JF754590\_LHBs\_P-D; HQ700488\_LHBs\_P-D; HQ700484\_LHBs\_P-D;  
HQ700482\_LHBs\_P-D; HQ700479\_LHBs\_P-D; HQ700471\_LHBs\_P-D; HQ700470\_LHBs\_P-D;  
HQ700469\_LHBs\_P-D; HQ700464\_LHBs\_P-D; HQ700459\_LHBs\_P-D; HQ700451\_LHBs\_P-D;  
HQ700450\_LHBs\_P-D; HQ700447\_LHBs\_P-D; HQ700443\_LHBs\_P-D; HQ700442\_LHBs\_P-D;  
HQ700441\_LHBs\_P-D; HQ700440\_LHBs\_P-D; HM750156\_LHBs\_P-D; HM750152\_LHBs\_P-D;  
GU456663\_LHBs\_P-D; GU456651\_LHBs\_P-D; GU456648\_LHBs\_P-D; GU456646\_LHBs\_P-D;  
GU456638\_LHBs\_P-D; GQ377589\_LHBs\_P-D; GQ183470\_LHBs\_P-D; FJ904443\_LHBs\_P-D;  
FJ904435\_LHBs\_P-D; FJ904424\_LHBs\_P-D; FJ904421\_LHBs\_P-D; FJ904420\_LHBs\_P-D;  
FJ904415\_LHBs\_P-D; FJ904412\_LHBs\_P-D; FJ904399\_LHBs\_P-D; FJ349230\_LHBs\_P-D;  
FJ349228\_LHBs\_P-D; EU787436\_LHBs\_P-D; EU594410\_LHBs\_P-D; EU594397\_LHBs\_P-D;  
EU594396\_LHBs\_P-D; X65257\_LHBs\_P-D; V01460\_LHBs\_P-D; KU668446\_LHBs\_P-D;  
KU668445\_LHBs\_P-D; KU668442\_LHBs\_P-D; KU668439\_LHBs\_P-D; KU668438\_LHBs\_P-D;  
KU668437\_LHBs\_P-D; KU668434\_LHBs\_P-D; KR139747\_LHBs\_P-D; KP322602\_LHBs\_P-D;  
KM606754\_LHBs\_P-D; KM606744\_LHBs\_P-D; KM577668\_LHBs\_P-D; KM519455\_LHBs\_P-D;  
KF779292\_LHBs\_P-D; KF779214\_LHBs\_P-D; KF679993\_LHBs\_P-D; KF679992\_LHBs\_P-D;  
KF170763\_LHBs\_P-D; KF170746\_LHBs\_P-D; JX090710\_LHBs\_P-D; JX090709\_LHBs\_P-D;  
JX090674\_LHBs\_P-D; JX090666\_LHBs\_P-D; JX090662\_LHBs\_P-D; JX090661\_LHBs\_P-D;  
JX090639\_LHBs\_P-D; JX090628\_LHBs\_P-D; JX090620\_LHBs\_P-D; JN664914\_LHBs\_P-D;  
JN664911\_LHBs\_P-D; JN664909\_LHBs\_P-D; HQ700511\_LHBs\_P-D; GQ922002\_LHBs\_P-D;  
GQ922001\_LHBs\_P-D; GQ183478\_LHBs\_P-D; FJ692533\_LHBs\_P-D; FJ692507\_LHBs\_P-D;  
FJ692506\_LHBs\_P-D; FJ349209\_LHBs\_P-D; JQ687530\_LHBs\_P-D; DQ464170\_LHBs\_P-D;  
AJ627222\_LHBs\_P-D; AB493846\_LHBs\_P-D; AY233291\_LHBs\_P-D; DQ315776\_LHBs\_P-D;  
AY738145\_LHBs\_C-E; AY738146\_LHBs\_P-E; AY738144\_LHBs\_P-E; AM494695\_LHBs\_P-E;



DQ060822\_LHBs\_P-E; HM363609\_LHBs\_P-E; JQ000009\_LHBs\_P-E; JF440017\_LHBs\_P-RF-DA;  
KU668440\_LHBs\_P-RF-DE; KX357627\_LHBs\_P-RF-DE; AY373430\_LHBs\_P-RF-DE; X65259\_LHBs\_P-RF-  
DA; FJ904414\_LHBs\_P-RF-DE; KJ586811\_LHBs\_P-RF-DF; KJ470897\_LHBs\_P-RF-DE; JN257164\_LHBs\_P-  
RF-DE; KX357635\_LHBs\_P-RF-DE; KX357633\_LHBs\_P-RF-DE; KX357623\_LHBs\_P-RF-DE;  
KJ470891\_LHBs\_P-RF-DE; KJ470890\_LHBs\_P-RF-DE; KJ470888\_LHBs\_P-RF-DE; KJ470886\_LHBs\_P-RF-  
DE; KJ470884\_LHBs\_P-RF-DE; KF170740\_LHBs\_P-RF-DE; EU594435\_LHBs\_P-RF-DE;  
AY233295\_LHBs\_P-RF-DE; AB210819\_LHBs\_P-RF-DE; KP168416\_LHBs\_P-RF-DE; KM577667\_LHBs\_P-  
RF-DE; GQ183486\_LHBs\_P-RF-DE; FJ692536\_LHBs\_P-RF-DE; DQ111987\_LHBs\_P-RF-DE;  
AJ627217\_LHBs\_P-RF-DE; AJ344117\_LHBs\_P-RF-DE; AB583679\_LHBs\_P-RF-DE

**127 Protein sequences are covered at 27 %:**

KF779228\_LHBs\_P-D; KF779229\_LHBs\_P-D; AB116266\_LHBs\_P-D; AB555496\_LHBs\_P-D;  
AY161150\_LHBs\_P-D; AB674411\_LHBs\_P-D; GQ205385\_LHBs\_P-D; GQ205388\_LHBs\_P-D;  
KM524345\_LHBs\_P-D; KP322603\_LHBs\_P-D; GQ205384\_LHBs\_P-D; GQ205382\_LHBs\_P-D;  
JF754633\_LHBs\_P-D; GU456661\_LHBs\_P-D; FJ899792\_LHBs\_P-D; EU939681\_LHBs\_P-D;  
KX276998\_LHBs\_P-D; GU456679\_LHBs\_P-D; KJ843187\_LHBs\_P-D; KF471654\_LHBs\_P-D;  
KF170771\_LHBs\_P-D; KU668448\_LHBs\_P-D; GU456635\_LHBs\_P-D; JX036334\_LHBs\_P-D;  
JN040830\_LHBs\_P-D; JN040795\_LHBs\_P-D; JN040770\_LHBs\_P-D; KF170770\_LHBs\_P-D;  
JX898689\_LHBs\_P-D; JX090719\_LHBs\_P-D; JX090701\_LHBs\_P-D; JN604170\_LHBs\_P-D;  
EU787441\_LHBs\_P-D; KP090178\_LHBs\_P-D; KP090177\_LHBs\_P-D; JX090633\_LHBs\_P-D;  
KF170776\_LHBs\_P-D; KC875325\_LHBs\_P-D; KC875320\_LHBs\_P-D; KC875284\_LHBs\_P-D;  
KC875281\_LHBs\_P-D; KC875277\_LHBs\_P-D; JX090681\_LHBs\_P-D; JX036333\_LHBs\_P-D;  
JN257169\_LHBs\_P-D; JN040797\_LHBs\_P-D; FJ349231\_LHBs\_P-D; KU668447\_LHBs\_P-D;  
KU668436\_LHBs\_P-D; KP202936\_LHBs\_P-D; KF779224\_LHBs\_P-D; JX898697\_LHBs\_P-D;  
JX898694\_LHBs\_P-D; JX898692\_LHBs\_P-D; JX898691\_LHBs\_P-D; JX090659\_LHBs\_P-D;  
JN688713\_LHBs\_P-D; JN604313\_LHBs\_P-D; JN604272\_LHBs\_P-D; HQ833468\_LHBs\_P-D;  
KM524349\_LHBs\_P-D; KC875302\_LHBs\_P-D; KC875311\_LHBs\_P-D; KC875291\_LHBs\_P-D;  
JN040778\_LHBs\_P-D; GU456640\_LHBs\_P-D; JF754597\_LHBs\_P-D; EU594398\_LHBs\_P-D;  
KP165599\_LHBs\_P-D; GQ924652\_LHBs\_P-D; EU594408\_LHBs\_P-D; AB205128\_LHBs\_P-D;  
DQ464173\_LHBs\_P-D; AB274973\_LHBs\_P-E; FN594762\_LHBs\_P-E; AY738147\_LHBs\_P-E;  
GQ161768\_LHBs\_P-E; GQ161762\_LHBs\_P-E; GQ161817\_LHBs\_P-E; GQ161797\_LHBs\_P-E;  
HM363567\_LHBs\_P-E; GQ161783\_LHBs\_P-E; GQ161764\_LHBs\_P-E; AB274975\_LHBs\_P-E;  
EU239221\_LHBs\_P-E; HM363603\_LHBs\_P-E; GQ161785\_LHBs\_P-E; KM108622\_LHBs\_P-E;  
HM363611\_LHBs\_P-E; HM363584\_LHBs\_P-E; GQ161757\_LHBs\_P-E; AB274978\_LHBs\_P-E;  
HM363596\_LHBs\_P-E; HM363583\_LHBs\_P-E; HM363605\_LHBs\_P-E; HM363593\_LHBs\_P-E;  
HM363578\_LHBs\_P-E; GQ161824\_LHBs\_P-E; GQ161822\_LHBs\_P-E; KF779353\_LHBs\_P-RF-DA;  
KU736914\_LHBs\_P-RF-DE; KX357631\_LHBs\_P-RF-DE; GQ205377\_LHBs\_P-RF-DE; GQ205378\_LHBs\_P-  
RF-DE; GQ205386\_LHBs\_P-RF-DE; KC875338\_LHBs\_P-RF-DE; JN664925\_LHBs\_P-RF-DE;  
JN664940\_LHBs\_P-RF-DE; AM494716\_LHBs\_P-RF-DE; FJ904396\_LHBs\_P-RF-DE; AB674432\_LHBs\_P-  
RF-DE; GQ205387\_LHBs\_P-RF-DE; JX898693\_LHBs\_P-RF-DE; JX898686\_LHBs\_P-RF-DE;  
JX898696\_LHBs\_P-RF-DE; JX898695\_LHBs\_P-RF-DE; FJ904394\_LHBs\_P-RF-DE; AB674436\_LHBs\_P-RF-  
DE; U95551\_LHBs\_P-RF-DE; JX898699\_LHBs\_P-RF-DE; JX898690\_LHBs\_P-RF-DE; JX898688\_LHBs\_P-  
RF-DE; JX898687\_LHBs\_P-RF-DE; JN664943\_LHBs\_P-RF-DE; KX357625\_LHBs\_P-RF-DE;  
KM606751\_LHBs\_P-RF-DE; KM577665\_LHBs\_P-RF-DE

**108 Protein sequences are covered at 26 %:**

JX310734\_LHBs\_P-D; AB674425\_LHBs\_P-D; AB674424\_LHBs\_P-D; KF170768\_LHBs\_P-D;  
JF754631\_LHBs\_P-D; AY741798\_LHBs\_P-D; AF151735\_LHBs\_P-D; JN642149\_LHBs\_P-D;  
JX096955\_LHBs\_P-D; AY741794\_LHBs\_P-D; AY741795\_LHBs\_P-D; AB270548\_LHBs\_P-D;  
AB270543\_LHBs\_P-D; AY741797\_LHBs\_P-D; AF121239\_LHBs\_P-D; KX827291\_LHBs\_P-D;  
GU456653\_LHBs\_P-D; JN642157\_LHBs\_P-D; JN257148\_LHBs\_P-D; JN040823\_LHBs\_P-D;



GU456682\_LHBs\_P-D; KP165597\_LHBs\_P-D; KP143743\_LHBs\_P-D; KP143742\_LHBs\_P-D;  
KC875276\_LHBs\_P-D; JN642134\_LHBs\_P-D; KF192834\_LHBs\_P-D; KF192832\_LHBs\_P-D;  
KF192831\_LHBs\_P-D; KF192830\_LHBs\_P-D; JX090703\_LHBs\_P-D; JX090606\_LHBs\_P-D;  
JN040815\_LHBs\_P-D; JX090721\_LHBs\_P-D; JN792912\_LHBs\_P-D; JN040818\_LHBs\_P-D;  
JN040806\_LHBs\_P-D; KF471656\_LHBs\_P-D; KF170755\_LHBs\_P-D; JX090715\_LHBs\_P-D;  
FJ349234\_LHBs\_P-D; KF779285\_LHBs\_P-D; KF779212\_LHBs\_P-D; KF471646\_LHBs\_P-D;  
JX090698\_LHBs\_P-D; JN664912\_LHBs\_P-D; HM750153\_LHBs\_P-D; FJ904422\_LHBs\_P-D;  
FJ349216\_LHBs\_P-D; KF779303\_LHBs\_P-D; JX090671\_LHBs\_P-D; GQ183481\_LHBs\_P-D;  
KM524350\_LHBs\_P-D; KF471649\_LHBs\_P-D; JX090695\_LHBs\_P-D; GU456677\_LHBs\_P-D;  
GQ183480\_LHBs\_P-D; KF779318\_LHBs\_P-D; KF779296\_LHBs\_P-D; KF779288\_LHBs\_P-D;  
KF779216\_LHBs\_P-D; GQ922005\_LHBs\_P-D; DQ336690\_LHBs\_P-D; DQ336691\_LHBs\_P-D;  
DQ336678\_LHBs\_P-D; DQ336679\_LHBs\_P-D; DQ336675\_LHBs\_P-D; DQ336676\_LHBs\_P-D;  
DQ336677\_LHBs\_P-D; DQ464175\_LHBs\_P-D; DQ464172\_LHBs\_P-D; DQ464177\_LHBs\_P-D;  
DQ336685\_LHBs\_P-D; AB274985\_LHBs\_P-E; AY935700\_LHBs\_P-E; FN594752\_LHBs\_P-E;  
GQ161758\_LHBs\_P-E; GQ161766\_LHBs\_P-E; GQ161774\_LHBs\_P-E; HM363598\_LHBs\_P-E;  
HM363599\_LHBs\_P-E; KF849726\_LHBs\_P-E; KF199901\_LHBs\_P-F; KF779236\_LHBs\_P-F;  
AB375164\_LHBs\_P-H; HM117850\_LHBs\_P-H; AB059661\_LHBs\_P-H; AB375159\_LHBs\_P-H;  
AB375162\_LHBs\_P-H; AY090454\_LHBs\_C-H; AY090460\_LHBs\_P-H; HM117851\_LHBs\_P-H;  
JN604310\_LHBs\_P-H; KX264501\_LHBs\_P-H; JN664915\_LHBs\_P-RF-DE; JN664933\_LHBs\_P-RF-DA;  
KF192841\_LHBs\_P-RF-DE; KF192840\_LHBs\_P-RF-DE; KF192839\_LHBs\_P-RF-DE; KF192838\_LHBs\_P-  
RF-DE; KF192837\_LHBs\_P-RF-DE; KF192836\_LHBs\_P-RF-DE; KF192835\_LHBs\_P-RF-DE;  
KF192833\_LHBs\_P-RF-DE; J02202\_LHBs\_P-RF-DE; HQ700582\_LHBs\_P-RF-DE; JN257204\_LHBs\_P-RF-  
DE; KU711666\_LHBs\_P-RF-DE

**67 Protein sequences are covered at 25 %:**

KF779230\_LHBs\_P-D; KF779382\_LHBs\_P-D; GU456665\_LHBs\_P-D; JX090615\_LHBs\_P-D;  
JN040769\_LHBs\_P-D; AB674408\_LHBs\_P-D; DQ486025\_LHBs\_P-D; JX090609\_LHBs\_P-D;  
JX090635\_LHBs\_P-D; AY741796\_LHBs\_P-D; FJ349213\_LHBs\_P-D; JN642131\_LHBs\_P-D;  
AJ131956\_LHBs\_P-D; AB674422\_LHBs\_P-D; L27106\_LHBs\_P-D; KF170756\_LHBs\_P-D;  
JN642138\_LHBs\_P-D; JN040810\_LHBs\_P-D; JN040784\_LHBs\_P-D; JX090724\_LHBs\_P-D;  
JF754635\_LHBs\_P-D; GU456669\_LHBs\_P-D; GU456652\_LHBs\_P-D; KF779289\_LHBs\_P-D;  
KF779225\_LHBs\_P-D; JN040762\_LHBs\_P-D; JX090647\_LHBs\_P-D; JX090641\_LHBs\_P-D;  
JN642166\_LHBs\_P-D; JN257202\_LHBs\_P-D; KF779302\_LHBs\_P-D; JX090646\_LHBs\_P-D;  
JN642165\_LHBs\_P-D; EF103277\_LHBs\_P-D; KF779301\_LHBs\_P-D; KC875337\_LHBs\_P-D;  
FJ904445\_LHBs\_P-D; KF779218\_LHBs\_P-D; KF779217\_LHBs\_P-D; JX090605\_LHBs\_P-D;  
JN664937\_LHBs\_P-D; EU919197\_LHBs\_P-D; JN642145\_LHBs\_P-D; JN604238\_LHBs\_P-D;  
JN040828\_LHBs\_P-D; JN664913\_LHBs\_P-D; DQ329356\_LHBs\_P-D; AM494711\_LHBs\_P-E;  
GQ161803\_LHBs\_P-E; FN545842\_LHBs\_P-E; AM494692\_LHBs\_P-E; KM108626\_LHBs\_P-E;  
HM363602\_LHBs\_P-E; KF170751\_LHBs\_P-E; GQ161825\_LHBs\_P-E; KF170790\_LHBs\_P-E;  
HM363600\_LHBs\_P-E; KF170783\_LHBs\_P-E; KM108624\_LHBs\_P-E; KF170786\_LHBs\_P-E;  
GQ161836\_LHBs\_P-E; AB059659\_LHBs\_P-H; AB375160\_LHBs\_P-H; FJ356716\_LHBs\_C-H;  
JN257154\_LHBs\_P-RF-DE; KX827302\_LHBs\_P-RF-DE; AB048702\_LHBs\_P-RF-DE

**25 Protein sequences are covered at 24 %:**

GQ477455\_LHBs\_P-D; JX310727\_LHBs\_P-D; AY090452\_LHBs\_P-D; GU456678\_LHBs\_P-D;  
JN040782\_LHBs\_P-D; JN040771\_LHBs\_P-D; JX090636\_LHBs\_P-D; JX090616\_LHBs\_P-D;  
JN040773\_LHBs\_P-D; JN642140\_LHBs\_P-D; JN040801\_LHBs\_P-D; KC875282\_LHBs\_P-D;  
GU456683\_LHBs\_P-D; KM524356\_LHBs\_P-D; JX090640\_LHBs\_P-D; JF754632\_LHBs\_P-D;  
HQ236016\_LHBs\_P-D; JN257170\_LHBs\_P-D; JF754599\_LHBs\_P-D; JX090613\_LHBs\_P-D;  
JX090607\_LHBs\_P-D; DQ329357\_LHBs\_P-D; DQ464176\_LHBs\_P-D; KM108610\_LHBs\_P-E;  
DQ991753\_LHBs\_P-RF-DE



**103 Protein sequences are covered at 23 %:**

EU787438\_LHBs\_P-D; KC875298\_LHBs\_P-D; EU155893\_LHBs\_P-D; JX090680\_LHBs\_P-D;  
JF439709\_LHBs\_P-D; JF439706\_LHBs\_P-D; JF439711\_LHBs\_P-D; JF439699\_LHBs\_P-D;  
JF439700\_LHBs\_P-D; JF439701\_LHBs\_P-D; JF439704\_LHBs\_P-D; JF439705\_LHBs\_P-D;  
JF439710\_LHBs\_P-D; JF439708\_LHBs\_P-D; JF754617\_LHBs\_P-D; GU456636\_LHBs\_P-D;  
AB330367\_LHBs\_P-D; JF754588\_LHBs\_P-D; JX090690\_LHBs\_P-D; JX090611\_LHBs\_P-D;  
EF103281\_LHBs\_P-D; KF471659\_LHBs\_P-D; JN664931\_LHBs\_P-D; GU456645\_LHBs\_P-D;  
GU456643\_LHBs\_P-D; KC875333\_LHBs\_P-D; JN642164\_LHBs\_P-D; FJ904419\_LHBs\_P-D;  
AJ344116\_LHBs\_P-D; FJ904418\_LHBs\_P-D; KM606755\_LHBs\_P-D; KM524338\_LHBs\_P-D;  
JX090723\_LHBs\_P-D; KM108599\_LHBs\_P-D; KF471641\_LHBs\_P-D; KF170761\_LHBs\_P-D;  
JN040821\_LHBs\_P-D; JN040809\_LHBs\_P-D; HQ700463\_LHBs\_P-D; GQ183461\_LHBs\_P-D;  
JX090707\_LHBs\_P-D; JN040824\_LHBs\_P-D; EU594434\_LHBs\_P-D; KP995100\_LHBs\_P-D;  
JX090697\_LHBs\_P-D; KX276975\_LHBs\_P-D; KF170772\_LHBs\_P-D; KC875326\_LHBs\_P-D;  
KC875318\_LHBs\_P-D; KC875287\_LHBs\_P-D; JX090658\_LHBs\_P-D; JN257205\_LHBs\_P-D;  
JN040750\_LHBs\_P-D; JF754615\_LHBs\_P-D; FJ349214\_LHBs\_P-D; FJ349206\_LHBs\_P-D;  
KM108604\_LHBs\_P-D; KM108598\_LHBs\_P-D; KM108597\_LHBs\_P-D; KF471660\_LHBs\_P-D;  
KC875303\_LHBs\_P-D; JX090693\_LHBs\_P-D; KF471650\_LHBs\_P-D; HQ700446\_LHBs\_P-D;  
HQ700445\_LHBs\_P-D; GU456647\_LHBs\_P-D; KX827292\_LHBs\_P-D; KF170767\_LHBs\_P-D;  
JN664920\_LHBs\_P-D; JN664939\_LHBs\_P-D; DQ464168\_LHBs\_P-D; AB274979\_LHBs\_P-E;  
HM363607\_LHBs\_P-E; HM363585\_LHBs\_P-E; AM494697\_LHBs\_P-E; KF170787\_LHBs\_P-E;  
GQ161834\_LHBs\_P-E; JF440012\_LHBs\_P-RF-DE; JF440010\_LHBs\_P-RF-DE; JF439994\_LHBs\_P-RF-DE;  
JF440004\_LHBs\_P-RF-DE; JF440005\_LHBs\_P-RF-DE; JF439995\_LHBs\_P-RF-DE; JF439996\_LHBs\_P-RF-DE;  
JF439999\_LHBs\_P-RF-DE; JF440002\_LHBs\_P-RF-DE; JF440003\_LHBs\_P-RF-DE; JF440007\_LHBs\_P-RF-DE;  
JF440009\_LHBs\_P-RF-DE; JF440014\_LHBs\_P-RF-DE; JF440015\_LHBs\_P-RF-DE;  
JF440001\_LHBs\_P-RF-DE; AB033558\_LHBs\_P-RF-DE; KM577666\_LHBs\_P-RF-DE; KC875339\_LHBs\_P-RF-DE;  
JF439998\_LHBs\_P-RF-DE; KM606741\_LHBs\_P-RF-DE; HQ700536\_LHBs\_P-RF-DE;  
KM524359\_LHBs\_P-RF-DE; EU594436\_LHBs\_P-RF-DE; EF103285\_LHBs\_P-RF-DE; KX357636\_LHBs\_P-RF-DE;  
JN664946\_LHBs\_P-RF-DA

**160 Protein sequences are covered at 22 %:**

AB674416\_LHBs\_P-D; AB674428\_LHBs\_P-D; AB048701\_LHBs\_P-D; AF280817\_LHBs\_P-D;  
JN642150\_LHBs\_P-D; KP090179\_LHBs\_P-D; KF471644\_LHBs\_P-D; HQ700472\_LHBs\_P-D;  
KF170774\_LHBs\_P-D; JN040786\_LHBs\_P-D; GQ183469\_LHBs\_P-D; GQ183460\_LHBs\_P-D;  
JN040788\_LHBs\_P-D; KF779219\_LHBs\_P-D; JN040768\_LHBs\_P-D; JN040777\_LHBs\_P-D;  
KU736927\_LHBs\_P-D; KM108603\_LHBs\_P-D; EU939680\_LHBs\_P-D; KM108594\_LHBs\_P-D;  
JF754601\_LHBs\_P-D; EU921419\_LHBs\_P-D; AY236162\_LHBs\_P-D; DQ304551\_LHBs\_P-D;  
DQ336674\_LHBs\_P-D; DQ336689\_LHBs\_P-D; AB219533\_LHBs\_P-E; HM363572\_LHBs\_P-E;  
AB214516\_LHBs\_P-F; DQ823089\_LHBs\_P-F; DQ823087\_LHBs\_P-F; AF223962\_LHBs\_P-F;  
DQ776247\_LHBs\_P-F; DQ823088\_LHBs\_P-F; DQ823090\_LHBs\_P-F; EU366116\_LHBs\_P-F;  
KJ843207\_LHBs\_P-F; JN811655\_LHBs\_P-F; KX264499\_LHBs\_P-F; KJ843224\_LHBs\_P-F;  
KJ843222\_LHBs\_P-F; KJ843221\_LHBs\_P-F; KJ843219\_LHBs\_P-F; KJ843213\_LHBs\_P-F;  
KJ843212\_LHBs\_P-F; KJ843211\_LHBs\_P-F; KJ843210\_LHBs\_P-F; KJ843208\_LHBs\_P-F;  
KJ843189\_LHBs\_P-F; JX079937\_LHBs\_P-F; JN811656\_LHBs\_P-F; HE981181\_LHBs\_P-F;  
FJ657528\_LHBs\_P-F; FJ657522\_LHBs\_P-F; DQ899145\_LHBs\_P-F; AB116654\_LHBs\_P-F;  
KP995110\_LHBs\_P-F; JN604233\_LHBs\_P-F; AF223964\_LHBs\_P-F; KT896494\_LHBs\_P-F;  
KP995120\_LHBs\_P-F; KC494402\_LHBs\_P-F; KC494401\_LHBs\_P-F; X75658\_LHBs\_C-F; X69798\_LHBs\_P-F;  
KX264497\_LHBs\_P-F; KP995107\_LHBs\_P-F; KP718113\_LHBs\_P-F; KP718104\_LHBs\_P-F;  
KM998715\_LHBs\_P-F; KM233681\_LHBs\_P-F; KJ843203\_LHBs\_P-F; KJ843202\_LHBs\_P-F;  
KJ843191\_LHBs\_P-F; KJ586808\_LHBs\_P-F; KC494405\_LHBs\_P-F; KC494403\_LHBs\_P-F;  
KC494395\_LHBs\_P-F; KC494394\_LHBs\_P-F; KJ843197\_LHBs\_P-F; KJ843174\_LHBs\_P-F;





KC494404\_LHBs\_P-F; KX264496\_LHBs\_P-F; KP995098\_LHBs\_P-F; KJ843206\_LHBs\_P-F;  
KJ843204\_LHBs\_P-F; KJ843201\_LHBs\_P-F; KJ843200\_LHBs\_P-F; KJ843199\_LHBs\_P-F;  
KJ843198\_LHBs\_P-F; KJ843196\_LHBs\_P-F; KJ843195\_LHBs\_P-F; KJ843194\_LHBs\_P-F;  
KJ843193\_LHBs\_P-F; KJ843190\_LHBs\_P-F; KJ843181\_LHBs\_P-F; KJ843180\_LHBs\_P-F;  
KJ843179\_LHBs\_P-F; KJ843178\_LHBs\_P-F; KJ843177\_LHBs\_P-F; KJ843176\_LHBs\_P-F;  
KJ843171\_LHBs\_P-F; KJ843167\_LHBs\_P-F; KJ843164\_LHBs\_P-F; KJ843163\_LHBs\_P-F;  
JX079936\_LHBs\_P-F; HM585200\_LHBs\_P-F; FJ709457\_LHBs\_P-F; FJ709462\_LHBs\_P-F;  
AY090459\_LHBs\_P-F; AY090461\_LHBs\_P-F; HM585186\_LHBs\_P-F; HM585194\_LHBs\_P-F;  
HM590471\_LHBs\_P-F; HM590472\_LHBs\_P-F; AY179735\_LHBs\_P-F; AB064316\_LHBs\_P-F;  
AB116552\_LHBs\_P-F; FJ709464\_LHBs\_P-F; JN792920\_LHBs\_P-F; JN792919\_LHBs\_P-F;  
JN688703\_LHBs\_P-F; JN688699\_LHBs\_P-F; JN688691\_LHBs\_P-F; HQ378247\_LHBs\_P-F;  
HM590473\_LHBs\_P-F; HM585199\_LHBs\_P-F; HM585197\_LHBs\_P-F; HM585196\_LHBs\_P-F;  
HM585193\_LHBs\_P-F; HM585192\_LHBs\_P-F; HM585190\_LHBs\_P-F; HM585189\_LHBs\_P-F;  
HM585188\_LHBs\_P-F; HM585187\_LHBs\_P-F; HE981183\_LHBs\_P-F; HE981182\_LHBs\_P-F;  
FJ709494\_LHBs\_P-F; FJ709465\_LHBs\_P-F; FJ709460\_LHBs\_P-F; FJ657529\_LHBs\_P-F;  
EU670262\_LHBs\_P-F; EU366133\_LHBs\_P-F; EU366118\_LHBs\_P-F; DQ823095\_LHBs\_P-F;  
DQ823094\_LHBs\_P-F; DQ823093\_LHBs\_P-F; DQ823092\_LHBs\_P-F; DQ823091\_LHBs\_P-F;  
FJ709458\_LHBs\_P-F; FJ709459\_LHBs\_P-F; HM585191\_LHBs\_P-F; HM585198\_LHBs\_P-F;  
DQ899142\_LHBs\_P-F; DQ899143\_LHBs\_P-F; AY090455\_LHBs\_P-F; AY311369\_LHBs\_P-F;  
AB059660\_LHBs\_P-H; AY090457\_LHBs\_P-H; FJ349221\_LHBs\_P-RF-DE

**74 Protein sequences are covered at 21 %:**

JN688685\_LHBs\_P-D; AB674419\_LHBs\_P-D; JF439692\_LHBs\_P-D; AB674423\_LHBs\_P-D;  
JN040775\_LHBs\_P-D; JQ707690\_LHBs\_P-D; JQ707683\_LHBs\_P-D; JQ707697\_LHBs\_P-D;  
JQ707699\_LHBs\_P-D; JQ707702\_LHBs\_P-D; JQ707706\_LHBs\_P-D; JQ707682\_LHBs\_P-D;  
JQ707684\_LHBs\_P-D; JQ707685\_LHBs\_P-D; JQ707687\_LHBs\_P-D; JQ707688\_LHBs\_P-D;  
JQ707691\_LHBs\_P-D; JQ707692\_LHBs\_P-D; JQ707694\_LHBs\_P-D; JQ707695\_LHBs\_P-D;  
JQ707696\_LHBs\_P-D; JQ707698\_LHBs\_P-D; JQ707700\_LHBs\_P-D; JQ707701\_LHBs\_P-D;  
JQ707704\_LHBs\_P-D; JQ707705\_LHBs\_P-D; JQ707686\_LHBs\_P-D; JQ707689\_LHBs\_P-D;  
JN642133\_LHBs\_P-D; AB674431\_LHBs\_P-D; JN040787\_LHBs\_P-D; GQ183459\_LHBs\_P-D;  
JX090629\_LHBs\_P-D; JN040779\_LHBs\_P-D; AF121242\_LHBs\_P-D; JX090644\_LHBs\_P-D;  
KF779222\_LHBs\_P-D; JN040800\_LHBs\_P-D; JF754623\_LHBs\_P-D; HQ236015\_LHBs\_P-D;  
GU456650\_LHBs\_P-D; JN040758\_LHBs\_P-D; JN040808\_LHBs\_P-D; JF754610\_LHBs\_P-D;  
KF471657\_LHBs\_P-D; JX090706\_LHBs\_P-D; KF170750\_LHBs\_P-E; KF170782\_LHBs\_P-E;  
FN594749\_LHBs\_P-E; AM494699\_LHBs\_P-E; HM363608\_LHBs\_P-E; KM108625\_LHBs\_P-E;  
JN688720\_LHBs\_P-F; KP995115\_LHBs\_P-F; JN792917\_LHBs\_P-F; JN792918\_LHBs\_P-F;  
HM622135\_LHBs\_P-F; KP995113\_LHBs\_P-F; FJ356715\_LHBs\_P-H; AB275308\_LHBs\_P-H;  
AB353764\_LHBs\_P-H; AB179747\_LHBs\_P-H; AB266536\_LHBs\_P-H; AB818694\_LHBs\_P-H;  
EF157291\_LHBs\_P-H; EU498228\_LHBs\_P-H; HM066946\_LHBs\_P-H; HQ285946\_LHBs\_P-H;  
KM386676\_LHBs\_P-RF-DE; JF440011\_LHBs\_P-RF-DE; JN040803\_LHBs\_P-RF-DE; FJ904437\_LHBs\_P-  
RF-DE; KX357634\_LHBs\_P-RF-DE; FJ349207\_LHBs\_P-RF-DE

**35 Protein sequences are covered at 20 %:**

KM524340\_LHBs\_P-D; JN604139\_LHBs\_P-D; DQ464169\_LHBs\_P-D; GQ477458\_LHBs\_P-D;  
DQ111986\_LHBs\_P-D; JN604250\_LHBs\_P-D; KF471640\_LHBs\_P-D; GU357846\_LHBs\_P-D;  
JX090622\_LHBs\_P-D; JN040766\_LHBs\_P-D; JN040751\_LHBs\_P-D; GU456637\_LHBs\_P-D;  
JN040811\_LHBs\_P-D; DQ304547\_LHBs\_P-D; AY236160\_LHBs\_P-D; DQ486021\_LHBs\_P-D;  
DQ464174\_LHBs\_P-D; AB205190\_LHBs\_P-E; DQ899146\_LHBs\_P-F; KC494397\_LHBs\_P-F;  
KP995116\_LHBs\_P-F; KJ843168\_LHBs\_P-F; KC494400\_LHBs\_P-F; KJ843205\_LHBs\_P-F;  
KJ843170\_LHBs\_P-F; KJ843169\_LHBs\_P-F; AF223963\_LHBs\_P-F; KX357624\_LHBs\_P-RF-DE;  
DQ464164\_LHBs\_P-RF-DE; JN664929\_LHBs\_P-RF-DE; AB188243\_LHBs\_P-RF-DE; JN642137\_LHBs\_P-



RF-DE; KX357629\_LHBs\_P-RF-DE; KP995112\_LHBs\_P-RF-DE; JN040798\_LHBs\_P-RF-DE

**65 Protein sequences are covered at 19 %:**

JN664926\_LHBs\_P-D; GQ183456\_LHBs\_P-D; JN040790\_LHBs\_P-D; JX090623\_LHBs\_P-D;  
EU921418\_LHBs\_P-D; JN040820\_LHBs\_P-D; JN040793\_LHBs\_P-D; DQ304548\_LHBs\_P-D;  
DQ304550\_LHBs\_P-D; DQ464178\_LHBs\_P-D; GQ161760\_LHBs\_P-E; EU239220\_LHBs\_P-E;  
FN594766\_LHBs\_P-E; AM494703\_LHBs\_P-E; EF576808\_LHBs\_P-F; AB365453\_LHBs\_P-F;  
AB365446\_LHBs\_P-F; KJ843175\_LHBs\_P-F; AF223965\_LHBs\_P-F; EF576812\_LHBs\_P-F;  
KJ843209\_LHBs\_P-F; KJ843220\_LHBs\_P-F; AY090456\_LHBs\_P-F; DQ899144\_LHBs\_P-F;  
JN604225\_LHBs\_P-F; JN792922\_LHBs\_P-F; AY090458\_LHBs\_C-F; HM585195\_LHBs\_P-F;  
KP995114\_LHBs\_P-F; X75663\_LHBs\_P-F; AB116550\_LHBs\_P-F; KP995106\_LHBs\_P-F;  
DQ899149\_LHBs\_P-F; JF439884\_LHBs\_P-F; JF439885\_LHBs\_P-F; FJ589067\_LHBs\_P-F;  
AB036915\_LHBs\_P-F; KP995123\_LHBs\_P-F; KP995125\_LHBs\_P-F; KP718111\_LHBs\_P-F;  
AB036905\_LHBs\_P-F; AB036909\_LHBs\_P-F; AB036910\_LHBs\_P-F; AB036911\_LHBs\_P-F;  
AB036912\_LHBs\_P-F; AB036914\_LHBs\_P-F; AB036916\_LHBs\_P-F; AB036917\_LHBs\_P-F;  
AB036918\_LHBs\_P-F; AB036919\_LHBs\_P-F; AB036920\_LHBs\_P-F; AB116549\_LHBs\_P-F;  
AB116551\_LHBs\_P-F; KX264498\_LHBs\_P-F; KP995101\_LHBs\_P-F; KP718112\_LHBs\_P-F;  
KP718103\_LHBs\_P-F; KP718109\_LHBs\_P-F; KP995126\_LHBs\_P-F; KP995124\_LHBs\_P-F;  
AY311370\_LHBs\_P-F; DQ464167\_LHBs\_P-RF-DE; JF440000\_LHBs\_P-RF-DE; JF440006\_LHBs\_P-RF-DE;  
JF440013\_LHBs\_P-RF-DE

**27 Protein sequences are covered at 18 %:**

JF439718\_LHBs\_P-D; GQ183465\_LHBs\_P-D; GQ183448\_LHBs\_P-D; JQ707693\_LHBs\_P-D;  
GQ183468\_LHBs\_P-D; GQ183466\_LHBs\_P-D; GQ183464\_LHBs\_P-D; GQ183463\_LHBs\_P-D;  
GQ183462\_LHBs\_P-D; GQ183458\_LHBs\_P-D; GQ183457\_LHBs\_P-D; GQ183455\_LHBs\_P-D;  
GQ183454\_LHBs\_P-D; GQ183453\_LHBs\_P-D; GQ183452\_LHBs\_P-D; GQ183451\_LHBs\_P-D;  
GQ183450\_LHBs\_P-D; GQ183449\_LHBs\_P-D; JN642126\_LHBs\_P-D; JN040822\_LHBs\_P-D;  
KF476030\_LHBs\_P-D; JX310726\_LHBs\_P-D; KF170760\_LHBs\_P-D; GQ184322\_LHBs\_P-D;  
DQ899147\_LHBs\_P-F; KP995104\_LHBs\_P-F; GU563560\_LHBs\_P-RF-DE

**18 Protein sequences are covered at 17 %:**

JX310735\_LHBs\_P-D; JX090634\_LHBs\_P-D; JN257200\_LHBs\_P-D; KC875304\_LHBs\_P-D;  
GQ167301\_LHBs\_P-D; GQ167302\_LHBs\_P-D; AM494714\_LHBs\_P-E; KJ843225\_LHBs\_P-F;  
AB166850\_LHBs\_P-F; KC494396\_LHBs\_P-F; KP995097\_LHBs\_P-F; JN604271\_LHBs\_P-F;  
FJ657525\_LHBs\_P-F; KC494399\_LHBs\_P-F; FJ589066\_LHBs\_P-F; KP995109\_LHBs\_P-F;  
AB205010\_LHBs\_P-H; AB674433\_LHBs\_P-RF-DE

**3 Protein sequences are covered at 16 %:**

KJ843185\_LHBs\_P-F; KP995119\_LHBs\_P-F; DQ899148\_LHBs\_P-F

**6 Protein sequences are covered at 15 %:**

EU155895\_LHBs\_P-D; GQ183467\_LHBs\_P-D; JF439703\_LHBs\_P-D; M32138\_LHBs\_P-D;  
JN040755\_LHBs\_P-D; KP995105\_LHBs\_P-F

**10 Protein sequences are covered at 14 %:**

FJ349215\_LHBs\_P-D; JN040812\_LHBs\_P-D; DQ336688\_LHBs\_P-D; DQ336687\_LHBs\_P-D;  
DQ336686\_LHBs\_P-D; DQ336692\_LHBs\_P-D; JQ272888\_LHBs\_P-F; KJ586807\_LHBs\_P-F;  
KP995118\_LHBs\_P-F; KP995117\_LHBs\_P-F

**1 Protein sequence is covered at 13 %:**

FJ349212\_LHBs\_P-RF-DE

**1 Protein sequence is covered at 12 %:**

DQ899150\_LHBs\_P-F

**3 Protein sequences are covered at 10 %:**

JF439696\_LHBs\_P-D; KJ638656\_LHBs\_P-F; KP995111\_LHBs\_P-F