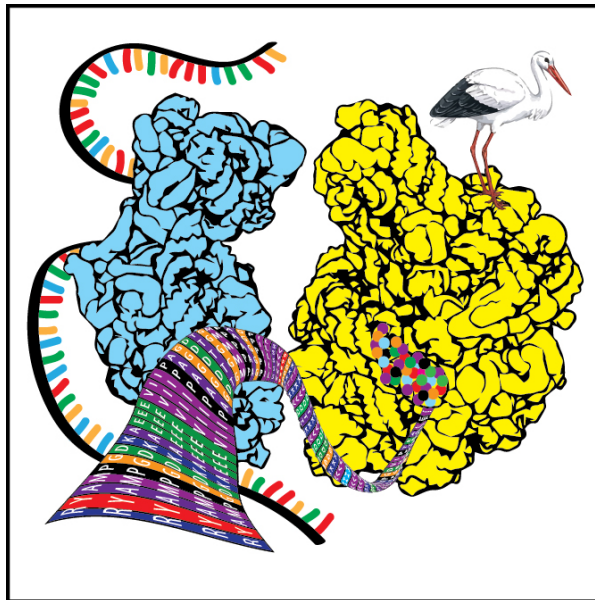


User manual IBiSS

UBiSS can be used from any web browser. There is no need for additional installation. If your browser does not have the Java plugin installed, it will prompt you to install it. Javascript must be enabled on your browser. For your visual comfort, a 17 inch screen or more is recommended. (however the site is usable on smaller screens). Firefox and Chrome browsers are recommended, especially for the management of Java applets.



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The Institute of Genetics and of Molecular and Cellular Biology (IGBMC),

University of Strasbourg, FRANCE

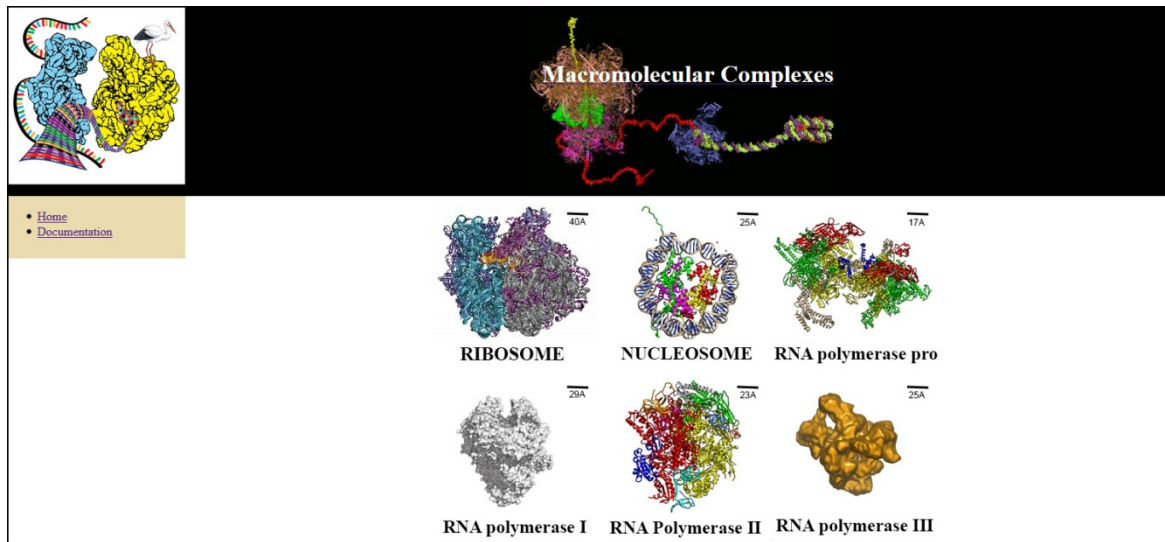
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I) The choice of the complex

On the home page, select the complex as of interest.

There are 9 complexes presented as thumbnails. A 10th thumbnail called "SINGLE PROTEIN" is present. It includes initiation factor monomer.



II) The different tools

- [Home](#)
- [All proteins for one species](#)
- [All species for one protein](#)
- [Compare species](#)
- [Taxonomy complex](#)
- [Coevolution](#)

1) All proteins for one species.

A) The choice of the species.

There is a list of species available for the selected complex. This means that no species proposed will give a null result. Simply choose a species and then submit.

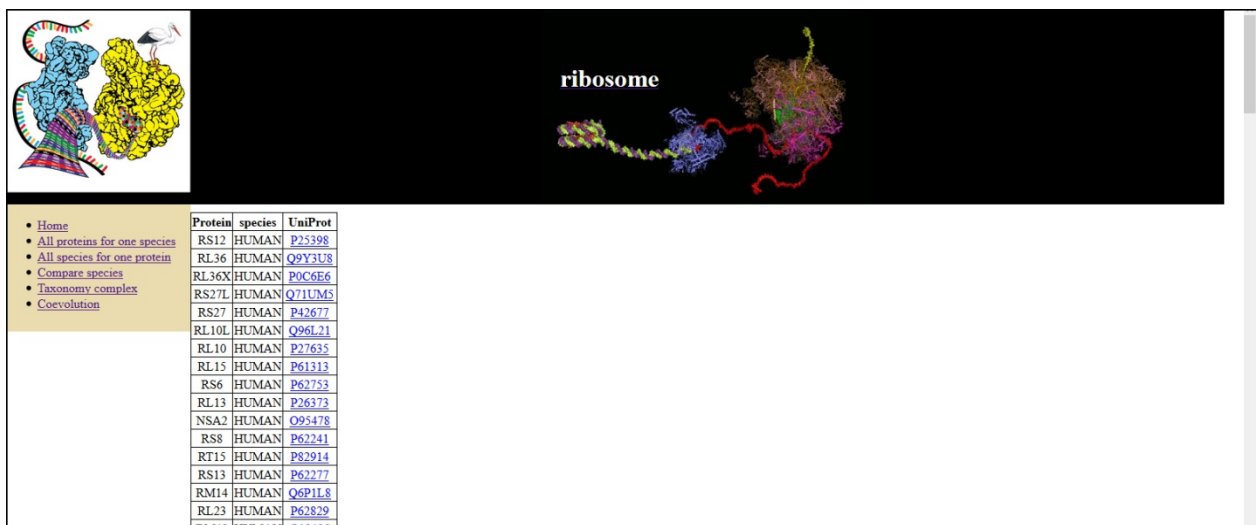


Species

- HUMAN - Homo sapiens
- HELSJ - Helicospiridium sp. subsp. Simulium jonesii
- HELVI - Heliothis virescens
- HERA2 - Herpetosiphon aurantiacus (strain ATCC 23779 / DSM 785)
- HERAR - Herminiimonas arsenicoxydans
- HETA2 - Heterosigma akashiwo (strain NIES-293)
- HETA4 - Heterosigma akashiwo (strain CCMP452)
- HETFO - Heteropneustes fossilis
- HIPCM - Hippocampus comes
- HOMAM - Homarus americanus
- HOOLU - Hookeia lucens
- HORMA - Hordeum marinum
- HORSE - Equus caballus
- HORVU - Hordeum vulgare
- HOUCO - Houttuynia cordata
- HUPLU - Huperzia lucidula
- HYDCA - Hydrastis canadensis
- HYDHA - Hydrophis hardwickii
- HYDMC - Hydrangea macrophylla
- HYDSO - Hydrogenobaculum sp. (strain Y04AAS1)

B) Le result

The result is in the form of a table that lists all the available protein for the complex studied and the selected species. The information is the name of the protein, the species and the link to Uniprot. This functionality is used to make a rapid assessment of the performance of the species in the database for the selected complex.




Protein	species	UniProt
RS12	HUMAN	P25398
RL36	HUMAN	Q9Y318
RL36X	HUMAN	P0C6E6
RS27L	HUMAN	Q71UM5
RS27	HUMAN	P42677
RL10L	HUMAN	Q96L21
RL10	HUMAN	P27655
RL15	HUMAN	P61313
RS6	HUMAN	P62753
RL13	HUMAN	P26373
NSA2	HUMAN	O95478
RS8	HUMAN	P62241
RT15	HUMAN	P82914
RS13	HUMAN	P62277
RM14	HUMAN	Q6P1L8
RL23	HUMAN	P62829
RS46	HUMAN	Q92486

2) All species for one protein.

A) The choice of protein

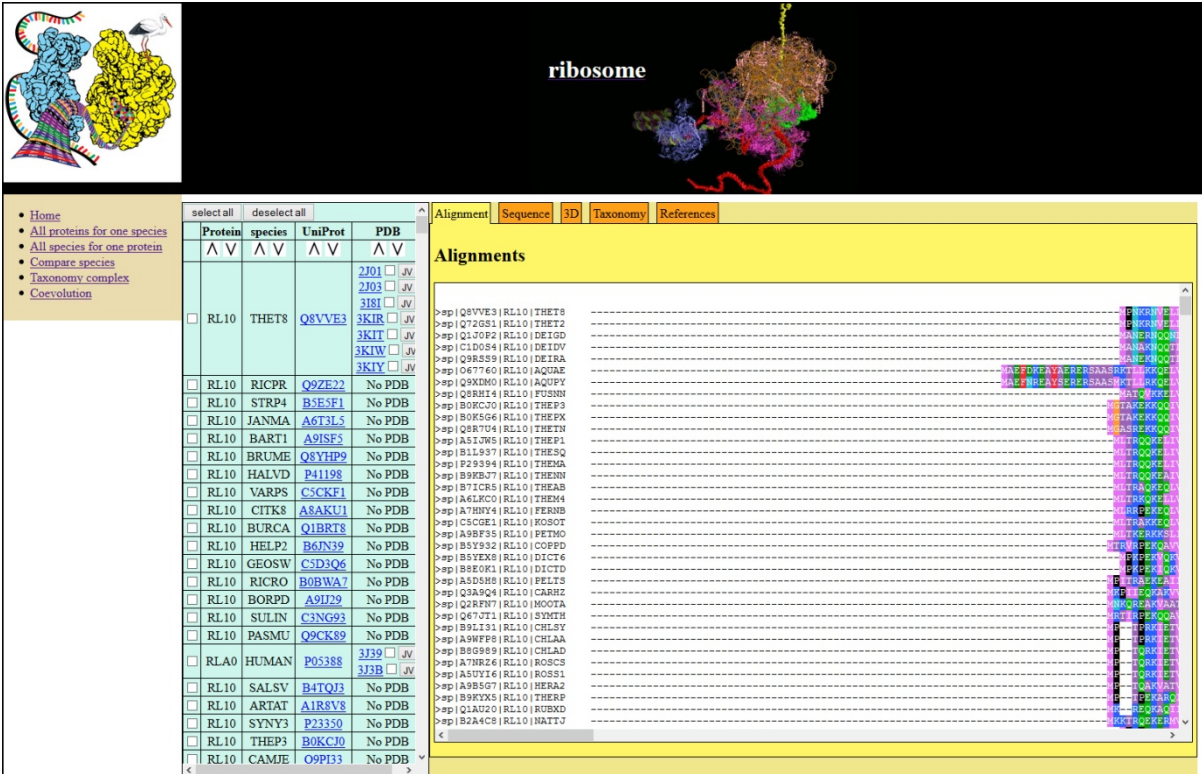
There is a list of component protein complex (and variant). Once selected simply submit.



The screenshot shows the IbiSS web interface. On the left, there is a navigation menu with links: Home, All proteins for one species, All species for one protein, Compare species, Taxonomy complex, and Coevolution. In the center, a 'Proteins' dropdown menu is open, showing a list of protein variants: L10e, S14p, S15p, S16p, S17e, S17p, S18p, S19e, S19p, S17p, S20p, S21e, S21p, S24e, S25, S25e, S26e, S27Ae, S27e, S28e, and S29e. On the right, a 3D ribbon diagram of a protein complex is shown, with the label 'ribosome' pointing to a specific part of the structure.

B) The result

The result consists of a table and a set of five tabs.



The screenshot shows the IbiSS web interface with the 'Alignments' tab selected. The interface displays a table of protein variants and their corresponding UniProt and PDB IDs. The table has columns for 'Protein', 'species', 'UniProt', and 'PDB'. The 'Protein' column lists variants like RL10, RICPR, STRP4, JANMA, BART1, BRUME, HALVD, VAPPS, CITK8, BURCA, HELP2, GEOSW, RICRO, BORPD, SULIN, PASMU, RLA0, SALSV, ARTAT, SYNY3, THEP3, and CAMJE. The 'species' column lists species like THET8, RICPR, STRP4, JANMA, BART1, BRUME, HALVD, VAPPS, CITK8, BURCA, HELP2, GEOSW, RICRO, BORPD, SULIN, PASMU, RLA0, SALSV, ARTAT, SYNY3, THEP3, and CAMJE. The 'UniProt' column lists UniProt IDs like Q8VVE3, Q9ZE22, B3E5F1, A6T3L5, A9ISF3, Q8YHP9, P41198, C5CKF1, A8AKU1, Q1BRT8, B6JN39, C5D3Q6, B0BWA7, A9IJ29, C3NG92, Q9CK89, P05388, B4TQJ3, A1R5V8, P23350, B0KCI0, and O9PI33. The 'PDB' column lists PDB IDs like 2J01, 2J03, 3I81, 3KIR, 3KIT, 3KIW, 3KIY, and No PDB. The 'Alignments' tab is selected, showing a sequence alignment of the protein variants. The alignment is displayed as a table with columns for 'Protein', 'species', 'UniProt', and 'PDB'. The 'Protein' column lists variants like RL10, RICPR, STRP4, JANMA, BART1, BRUME, HALVD, VAPPS, CITK8, BURCA, HELP2, GEOSW, RICRO, BORPD, SULIN, PASMU, RLA0, SALSV, ARTAT, SYNY3, THEP3, and CAMJE. The 'species' column lists species like THET8, RICPR, STRP4, JANMA, BART1, BRUME, HALVD, VAPPS, CITK8, BURCA, HELP2, GEOSW, RICRO, BORPD, SULIN, PASMU, RLA0, SALSV, ARTAT, SYNY3, THEP3, and CAMJE. The 'UniProt' column lists UniProt IDs like Q8VVE3, Q9ZE22, B3E5F1, A6T3L5, A9ISF3, Q8YHP9, P41198, C5CKF1, A8AKU1, Q1BRT8, B6JN39, C5D3Q6, B0BWA7, A9IJ29, C3NG92, Q9CK89, P05388, B4TQJ3, A1R5V8, P23350, B0KCI0, and O9PI33. The 'PDB' column lists PDB IDs like 2J01, 2J03, 3I81, 3KIR, 3KIT, 3KIW, 3KIY, and No PDB. The 'Alignments' tab is selected, showing a sequence alignment of the protein variants. The alignment is displayed as a table with columns for 'Protein', 'species', 'UniProt', and 'PDB'. The 'Protein' column lists variants like RL10, RICPR, STRP4, JANMA, BART1, BRUME, HALVD, VAPPS, CITK8, BURCA, HELP2, GEOSW, RICRO, BORPD, SULIN, PASMU, RLA0, SALSV, ARTAT, SYNY3, THEP3, and CAMJE. The 'species' column lists species like THET8, RICPR, STRP4, JANMA, BART1, BRUME, HALVD, VAPPS, CITK8, BURCA, HELP2, GEOSW, RICRO, BORPD, SULIN, PASMU, RLA0, SALSV, ARTAT, SYNY3, THEP3, and CAMJE. The 'UniProt' column lists UniProt IDs like Q8VVE3, Q9ZE22, B3E5F1, A6T3L5, A9ISF3, Q8YHP9, P41198, C5CKF1, A8AKU1, Q1BRT8, B6JN39, C5D3Q6, B0BWA7, A9IJ29, C3NG92, Q9CK89, P05388, B4TQJ3, A1R5V8, P23350, B0KCI0, and O9PI33. The 'PDB' column lists PDB IDs like 2J01, 2J03, 3I81, 3KIR, 3KIT, 3KIW, 3KIY, and No PDB.

c) Sequence Tab

By default, the Sequence tab is empty. This is similar to the overall alignment part. But the overall alignment is not practical if you want to compare a limited number of sequence that are not side by side in alignment. If we compare these specific sequences, one needs only to identify them in the table of results and check the check box in the first column. The selected sequences are added in the order of selection.

select all deselect all				Alignment	Sequence	3D	Taxonomy	References
Protein	species	UniProt	PDB	Sequences				
Λ V	Λ V	Λ V	Λ V					
<input type="checkbox"/>	RL10	LISW6	A0AF49	No PDB				
<input checked="" type="checkbox"/>	RL10	ARTS2	A0JZ99	No PDB				
<input type="checkbox"/>	RL10	BURCH	A0K3L5	No PDB				
<input type="checkbox"/>	RL10	AERHH	A0KQA7	No PDB				
<input type="checkbox"/>	RL10	SHESA	A0KRL5	No PDB				
<input checked="" type="checkbox"/>	RL10	SYNFM	A0LIJ2	No PDB				
<input type="checkbox"/>	RL10	ACIC1	A0LRL1	No PDB				
<input type="checkbox"/>	RL10	GRAFK	A0M3Z1	No PDB				
<input checked="" type="checkbox"/>	RL10	FRATN	A0Q869	No PDB				
<input checked="" type="checkbox"/>	RL10	MYCA1	A0QL54	No PDB				
<input checked="" type="checkbox"/>	RL10	MYCS2	A0QS62	No PDB				
<input type="checkbox"/>	RL10	CAMFF	A0RQJ7	No PDB				

Sequences

☒ sp|A0JZ99|RL10|ARTS2
☒ sp|A0LIJ2|RL10|SYNFM
☒ sp|A0Q869|RL10|FRATN
☒ sp|A0QS62|RL10|MYCS2
☒ sp|A0QL54|RL10|MYCA1

d) 3D tab

Important Note: Depending on the browser and browser version, it may be that when you change the tab, the Java applet is disabled then recharges when the returns are on this tab. In some cases the tab change does not cause stopping applet. This property is specific to the browser as well as its version and can change from one version to another for the same browser.

To properly use this tab it is required that the java plugin is installed in your browser. Once the tab is loaded, the java applet is automatically or request your permission loaded according to the permissions of the browser. This tab is divided into two parts. The first part is a Jmol applet with a user interface in JavaScript. The second part is a text box named PDB File. This is where the PDB column is useful. Just click on the PDB identifier for the structure load in the Jmol applet, so it is possible to see very quickly all structures present in this protein family.

select all deselect all				Alignment	Sequence	3D	Taxonomy	References
Protein	species	UniProt	PDB	Structure				
Λ V	Λ V	Λ V	Λ V					
<input type="checkbox"/>	RL10	ZYMMO	Q5NPK9	No PDB				
<input type="checkbox"/>	RL10	YERPY	B1JJJ6	No PDB				
<input type="checkbox"/>	RL10	YERPS	Q66FQ4	No PDB				
<input type="checkbox"/>	RL10	YERPP	A4TS31	No PDB				
<input type="checkbox"/>	RL10	YERPN	Q1CN80	No PDB				
<input type="checkbox"/>	RL10	YERPG	A9R0H6	No PDB				
<input type="checkbox"/>	RL10	YERPE	Q8ZAP3	No PDB				
<input type="checkbox"/>	RL10	YERPB	B2K110	No PDB				
<input type="checkbox"/>	RL10	YERPA	Q1C1T9	No PDB				
<input type="checkbox"/>	RL10	YERP3	A7FNI5	No PDB				
<input type="checkbox"/>	RL10	YERE8	A1JH8	No PDB				
<input type="checkbox"/>	RM11	YEAST	P36521	No PDB				
<input type="checkbox"/>	MRT4	YEAST	P33201	No PDB				
<input type="checkbox"/>	RLA0	YEAST	P05317	No PDB				
<input type="checkbox"/>	RL10	XYLFT	Q87A30	No PDB				
<input type="checkbox"/>	RL10	XYLFM	B0U5X9	No PDB				
<input type="checkbox"/>	RL10	XYLFA	Q9PA84	No PDB				
<input type="checkbox"/>	RL10	XYLF2	B2LA70	No PDB				
<input type="checkbox"/>	RL10	XANP2	A7IKP8	No PDB				
<input type="checkbox"/>	RL10	XANOR	Q5GW54	No PDB				
<input type="checkbox"/>	RL10	XANOP	B2SQP9	No PDB				
<input type="checkbox"/>	RL10	XANOM	Q2NZX6	No PDB				

Structure

Jmol

☐ Show All
☐ show wireframe
☐ show cartoon
☐ show trace
☐ show CPK
☐ show Backbone
☐ Ball and Stick

☐ Show Protein
☐ show wireframe
☐ show cartoon
☐ show trace
☒ show CPK
☐ show Backbone
☐ Ball and Stick

☐ Show DNA
☐ show wireframe
☐ show cartoon
☐ show trace
☐ show CPK
☐ show Backbone
☐ Ball and Stick

☐ Show RNA
☐ show wireframe
☒ show cartoon
☐ show trace
☐ show CPK
☐ show Backbone
☐ Ball and Stick

Ligand And Water
 water
 ligand
 SO4
 ATP

Turn
☐ spin

Color
 color cartoon none
 color trace none
 color backbone none
 color by

Background
 background black

☐ Ala ☐ Cys ☐ Asp ☐ Glu ☐ Phe ☐ Gly ☐ His ☐ Ile ☐ Lys ☐ Leu ☐ Met
☐ Asn ☐ Pyl ☐ Pro ☐ Gln ☐ Arg ☐ Ser ☐ Thr ☐ Sec ☐ Val ☐ Trp ☐ Tyr

☐ A ☐ T ☐ U
☐ G ☐ C

☐ C ☐ O ☐ N
☐ S ☐ P

☐ Ca ☐ Cl ☐ Mg
☐ Fe ☐ K ☐ Na



3) Compare species

A) The choice of species.

There is a list of species available for the selected complex. This means no species proposed will give a zero result. Simply choose the species and then submit it. There is no limit to the number of species to compare.

Warning, the absence of a protein in a species does not necessarily mean that the protein is not present in vivo. Only that it is missing from the database.

- Home
- All proteins for one species
- All species for one protein
- Compare species
- Taxonomy complex
- Coevolution

Species 1
HUMAN - Homo sapiens

Species 2
MOUSE - Mus musculus

Species 3
RABBIT - Oryctolagus cuniculus

Species 4
RAT - Rattus norvegicus

Species 5
ACACA - Acanthamoeba castellanii
ACAGA - Acanthamoeba castellanii
ACAM1 - Acaryochloris marina (strain MBIC 11017)
ACAPO - Acanthamoeba polyphaga
ACHAX - Achleplasma axanthum
ACHLA - Achleplasma laidlawii
ACHLI - Achleplasma laidlawii (strain PG-8A)
ACHSP - Achleplasma sp. (strain ATCC J233)
ACIAC - Acidovorax citrulli (strain AAC00-1)
ACIAD - Acinetobacter sp. (strain ADP1)
ACIAM - Acidianus ambivalens
ACIB3 - Acinetobacter baumannii (strain AB307-0294)
ACIB5 - Acinetobacter baumannii (strain AB0057)
ACIBC - Acinetobacter baumannii (strain ACICU)
ACIBS - Acinetobacter baumannii (strain SDF)
ACIBT - Acinetobacter baumannii (strain ATCC 17978 / NCDC KC 755)
ACIBY - Acinetobacter baumannii (strain AYE)
ACIC1 - Acidothermus cellulolyticus (strain ATCC 43068 / 11B)
ACIC5 - Acidobacterium capsulatum (strain ATCC 51196 / DSM 11244 / JCM 7670)
ACICJ - Acidiphilium cryptum (strain JF-5)
ACIET - Acidovorax ebreus (strain TPSY)

B) Result

the result is in the form of tables which include all the proteins of the complex. A blank line means that there is no protein present in the database.

<ul style="list-style-type: none">HomeAll proteins for one speciesAll species for one proteinCompare speciesTaxonomy complexCoevolution	<table><tr><th>Protein</th><th>Species</th><th>Size</th><th>UniProt</th></tr><tr><td>L10e</td><td>HUMAN</td><td>214</td><td>Q96L21</td></tr><tr><td>L10p</td><td>HUMAN</td><td>317</td><td>P05388</td></tr><tr><td>L11p</td><td>HUMAN</td><td>165</td><td>P30050</td></tr><tr><td>L12p</td><td>HUMAN</td><td>114</td><td>P05386</td></tr><tr><td>L13e</td><td>HUMAN</td><td>211</td><td>P26373</td></tr><tr><td>L13p</td><td>HUMAN</td><td>203</td><td>P40429</td></tr><tr><td>L14e</td><td>HUMAN</td><td>215</td><td>P50914</td></tr><tr><td>L14p</td><td>HUMAN</td><td>145</td><td>Q9P118</td></tr><tr><td>L15e</td><td>HUMAN</td><td>204</td><td>P61313</td></tr><tr><td>L15p</td><td>HUMAN</td><td>148</td><td>P46776</td></tr><tr><td>L16p</td><td>HUMAN</td><td>251</td><td>Q9NX20</td></tr><tr><td>L17p</td><td>HUMAN</td><td>175</td><td>Q9NRX2</td></tr><tr><td>L18Ae</td><td>HUMAN</td><td>176</td><td>Q02543</td></tr><tr><td>L18e</td><td>HUMAN</td><td>188</td><td>Q07020</td></tr><tr><td>L18p</td><td>HUMAN</td><td>180</td><td>Q9H0U6</td></tr><tr><td>L19e</td><td>HUMAN</td><td>196</td><td>P84098</td></tr><tr><td>L19p</td><td>HUMAN</td><td>292</td><td>P49406</td></tr><tr><td>L1p</td><td>HUMAN</td><td>217</td><td>P62906</td></tr><tr><td>L20p</td><td>HUMAN</td><td>149</td><td>Q9BYC9</td></tr><tr><td>L21e</td><td>HUMAN</td><td>160</td><td>P46778</td></tr><tr><td>L21p</td><td>HUMAN</td><td>205</td><td>Q7Z2W9</td></tr><tr><td>L22e</td><td>HUMAN</td><td>128</td><td>P35268</td></tr><tr><td>L22p</td><td>HUMAN</td><td>206</td><td>Q9NWU5</td></tr><tr><td>L23p</td><td>HUMAN</td><td>153</td><td>Q16540</td></tr><tr><td>L24e</td><td>HUMAN</td><td>157</td><td>P83731</td></tr><tr><td>L24p</td><td>HUMAN</td><td>216</td><td>Q96A35</td></tr><tr><td>L25p</td><td></td><td></td><td></td></tr><tr><td>L27e</td><td>HUMAN</td><td>136</td><td>P61353</td></tr><tr><td>L27p</td><td>HUMAN</td><td>148</td><td>Q9P0M9</td></tr></table>				Protein	Species	Size	UniProt	L10e	HUMAN	214	Q96L21	L10p	HUMAN	317	P05388	L11p	HUMAN	165	P30050	L12p	HUMAN	114	P05386	L13e	HUMAN	211	P26373	L13p	HUMAN	203	P40429	L14e	HUMAN	215	P50914	L14p	HUMAN	145	Q9P118	L15e	HUMAN	204	P61313	L15p	HUMAN	148	P46776	L16p	HUMAN	251	Q9NX20	L17p	HUMAN	175	Q9NRX2	L18Ae	HUMAN	176	Q02543	L18e	HUMAN	188	Q07020	L18p	HUMAN	180	Q9H0U6	L19e	HUMAN	196	P84098	L19p	HUMAN	292	P49406	L1p	HUMAN	217	P62906	L20p	HUMAN	149	Q9BYC9	L21e	HUMAN	160	P46778	L21p	HUMAN	205	Q7Z2W9	L22e	HUMAN	128	P35268	L22p	HUMAN	206	Q9NWU5	L23p	HUMAN	153	Q16540	L24e	HUMAN	157	P83731	L24p	HUMAN	216	Q96A35	L25p				L27e	HUMAN	136	P61353	L27p	HUMAN	148	Q9P0M9	<table><tr><th>Protein</th><th>Species</th><th>Size</th><th>UniProt</th></tr><tr><td>L10e</td><td>MOUSE</td><td>214</td><td>P86048</td></tr><tr><td>L10p</td><td>MOUSE</td><td>262</td><td>Q3TBW2</td></tr><tr><td>L11p</td><td>MOUSE</td><td>165</td><td>P35979</td></tr><tr><td>L12p</td><td>MOUSE</td><td>201</td><td>Q9DB15</td></tr><tr><td>L13e</td><td>MOUSE</td><td>211</td><td>P47963</td></tr><tr><td>L13p</td><td>MOUSE</td><td>203</td><td>P19253</td></tr><tr><td>L14e</td><td>MOUSE</td><td>217</td><td>Q9CR57</td></tr><tr><td>L14p</td><td>MOUSE</td><td>145</td><td>Q9D116</td></tr><tr><td>L15e</td><td>MOUSE</td><td>204</td><td>Q9CZM2</td></tr><tr><td>L15p</td><td>MOUSE</td><td>295</td><td>Q9CPR3</td></tr><tr><td>L16p</td><td>MOUSE</td><td>251</td><td>Q99N93</td></tr><tr><td>L17p</td><td>MOUSE</td><td>176</td><td>Q9D8P4</td></tr><tr><td>L18Ae</td><td>MOUSE</td><td>176</td><td>P62717</td></tr><tr><td>L18e</td><td>MOUSE</td><td>188</td><td>P35980</td></tr><tr><td>L18p</td><td>MOUSE</td><td>180</td><td>Q9CQL5</td></tr><tr><td>L19e</td><td>MOUSE</td><td>196</td><td>P84099</td></tr><tr><td>L19p</td><td>MOUSE</td><td>292</td><td>Q9D338</td></tr><tr><td>L1p</td><td>MOUSE</td><td>336</td><td>Q99N96</td></tr><tr><td>L20p</td><td>MOUSE</td><td>149</td><td>Q9CQL4</td></tr><tr><td>L21e</td><td>MOUSE</td><td>160</td><td>Q09167</td></tr><tr><td>L21p</td><td>MOUSE</td><td>209</td><td>Q9D1N9</td></tr><tr><td>L22e</td><td>MOUSE</td><td>122</td><td>Q9D757</td></tr><tr><td>L22p</td><td>MOUSE</td><td>206</td><td>Q8BU88</td></tr><tr><td>L23p</td><td>MOUSE</td><td>156</td><td>P62751</td></tr><tr><td>L24e</td><td>MOUSE</td><td>157</td><td>Q8BP67</td></tr><tr><td>L24p</td><td>MOUSE</td><td>216</td><td>Q9CQ06</td></tr><tr><td>L25p</td><td></td><td></td><td></td></tr><tr><td>L27e</td><td>MOUSE</td><td>136</td><td>P61358</td></tr><tr><td>L27p</td><td>MOUSE</td><td>148</td><td>Q99N92</td></tr></table>				Protein	Species	Size	UniProt	L10e	MOUSE	214	P86048	L10p	MOUSE	262	Q3TBW2	L11p	MOUSE	165	P35979	L12p	MOUSE	201	Q9DB15	L13e	MOUSE	211	P47963	L13p	MOUSE	203	P19253	L14e	MOUSE	217	Q9CR57	L14p	MOUSE	145	Q9D116	L15e	MOUSE	204	Q9CZM2	L15p	MOUSE	295	Q9CPR3	L16p	MOUSE	251	Q99N93	L17p	MOUSE	176	Q9D8P4	L18Ae	MOUSE	176	P62717	L18e	MOUSE	188	P35980	L18p	MOUSE	180	Q9CQL5	L19e	MOUSE	196	P84099	L19p	MOUSE	292	Q9D338	L1p	MOUSE	336	Q99N96	L20p	MOUSE	149	Q9CQL4	L21e	MOUSE	160	Q09167	L21p	MOUSE	209	Q9D1N9	L22e	MOUSE	122	Q9D757	L22p	MOUSE	206	Q8BU88	L23p	MOUSE	156	P62751	L24e	MOUSE	157	Q8BP67	L24p	MOUSE	216	Q9CQ06	L25p				L27e	MOUSE	136	P61358	L27p	MOUSE	148	Q99N92	<table><tr><th>Protein</th><th>Species</th><th>Size</th><th>UniProt</th></tr><tr><td>L10e</td><td>RAT</td><td>214</td><td>Q6PDV7</td></tr><tr><td>L10p</td><td>RAT</td><td>317</td><td>P19945</td></tr><tr><td>L11p</td><td>RAT</td><td>203</td><td>Q5XIE3</td></tr><tr><td>L12p</td><td>RAT</td><td>114</td><td>P19944</td></tr><tr><td>L13e</td><td>RAT</td><td>211</td><td>P41123</td></tr><tr><td>L13p</td><td>RAT</td><td>203</td><td>P35427</td></tr><tr><td>L14e</td><td>RAT</td><td>214</td><td>Q63507</td></tr><tr><td>L14p</td><td>RAT</td><td>140</td><td>P62832</td></tr><tr><td>L15e</td><td>RAT</td><td>204</td><td>P61314</td></tr><tr><td>L15p</td><td>RAT</td><td>148</td><td>P18445</td></tr><tr><td>L16p</td><td>RAT</td><td>251</td><td>Q5M818</td></tr><tr><td>L17p</td><td>RAT</td><td>176</td><td>Q6PDW6</td></tr><tr><td>L18Ae</td><td>RAT</td><td>176</td><td>P62718</td></tr><tr><td>L18e</td><td>RAT</td><td>188</td><td>P12001</td></tr><tr><td>L18p</td><td>RAT</td><td>297</td><td>P09895</td></tr><tr><td>L19e</td><td>RAT</td><td>196</td><td>P84100</td></tr><tr><td>L19p</td><td></td><td></td><td></td></tr><tr><td>L1p</td><td>RAT</td><td>217</td><td>P62907</td></tr><tr><td>L20p</td><td></td><td></td><td></td></tr><tr><td>L21e</td><td>RAT</td><td>160</td><td>P20280</td></tr><tr><td>L21p</td><td></td><td></td><td></td></tr><tr><td>L22e</td><td>RAT</td><td>128</td><td>P47198</td></tr><tr><td>L22p</td><td>RAT</td><td>184</td><td>P24049</td></tr><tr><td>L23p</td><td>RAT</td><td>156</td><td>P62752</td></tr><tr><td>L24e</td><td>RAT</td><td>163</td><td>Q6PG67</td></tr><tr><td>L24p</td><td>RAT</td><td>216</td><td>Q6GH47</td></tr><tr><td>L25p</td><td></td><td></td><td></td></tr><tr><td>L27e</td><td>RAT</td><td>136</td><td>P61354</td></tr><tr><td>L27p</td><td></td><td></td><td></td></tr></table>				Protein	Species	Size	UniProt	L10e	RAT	214	Q6PDV7	L10p	RAT	317	P19945	L11p	RAT	203	Q5XIE3	L12p	RAT	114	P19944	L13e	RAT	211	P41123	L13p	RAT	203	P35427	L14e	RAT	214	Q63507	L14p	RAT	140	P62832	L15e	RAT	204	P61314	L15p	RAT	148	P18445	L16p	RAT	251	Q5M818	L17p	RAT	176	Q6PDW6	L18Ae	RAT	176	P62718	L18e	RAT	188	P12001	L18p	RAT	297	P09895	L19e	RAT	196	P84100	L19p				L1p	RAT	217	P62907	L20p				L21e	RAT	160	P20280	L21p				L22e	RAT	128	P47198	L22p	RAT	184	P24049	L23p	RAT	156	P62752	L24e	RAT	163	Q6PG67	L24p	RAT	216	Q6GH47	L25p				L27e	RAT	136	P61354	L27p				<table><tr><th>Protein</th><th>Species</th><th>Size</th><th>UniProt</th></tr><tr><td>L10e</td><td></td><td></td><td></td></tr><tr><td>L10p</td><td></td><td></td><td></td></tr><tr><td>L11p</td><td></td><td></td><td></td></tr><tr><td>L12p</td><td>K</td><td></td><td></td></tr><tr><td>L13e</td><td></td><td></td><td></td></tr><tr><td>L13p</td><td></td><td></td><td></td></tr><tr><td>L14e</td><td></td><td></td><td></td></tr><tr><td>L14p</td><td></td><td></td><td></td></tr><tr><td>L15e</td><td></td><td></td><td></td></tr><tr><td>L15p</td><td></td><td></td><td></td></tr><tr><td>L16p</td><td></td><td></td><td></td></tr><tr><td>L17p</td><td></td><td></td><td></td></tr><tr><td>L18Ae</td><td></td><td></td><td></td></tr><tr><td>L18e</td><td></td><td></td><td></td></tr><tr><td>L18p</td><td>R</td><td></td><td></td></tr><tr><td>L19e</td><td></td><td></td><td></td></tr><tr><td>L19p</td><td></td><td></td><td></td></tr><tr><td>L1p</td><td></td><td></td><td></td></tr><tr><td>L20p</td><td></td><td></td><td></td></tr><tr><td>L21e</td><td></td><td></td><td></td></tr><tr><td>L21p</td><td></td><td></td><td></td></tr><tr><td>L22e</td><td></td><td></td><td></td></tr><tr><td>L22p</td><td></td><td></td><td></td></tr><tr><td>L23p</td><td></td><td></td><td></td></tr><tr><td>L24e</td><td></td><td></td><td></td></tr><tr><td>L24p</td><td></td><td></td><td></td></tr><tr><td>L25p</td><td></td><td></td><td></td></tr><tr><td>L27e</td><td></td><td></td><td></td></tr><tr><td>L27p</td><td></td><td></td><td></td></tr></table>				Protein	Species	Size	UniProt	L10e				L10p				L11p				L12p	K			L13e				L13p				L14e				L14p				L15e				L15p				L16p				L17p				L18Ae				L18e				L18p	R			L19e				L19p				L1p				L20p				L21e				L21p				L22e				L22p				L23p				L24e				L24p				L25p				L27e				L27p			
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L17p	MOUSE	176	Q9D8P4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L18Ae	MOUSE	176	P62717																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L18e	MOUSE	188	P35980																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L18p	MOUSE	180	Q9CQL5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L19e	MOUSE	196	P84099																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L19p	MOUSE	292	Q9D338																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L1p	MOUSE	336	Q99N96																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L20p	MOUSE	149	Q9CQL4																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L21e	MOUSE	160	Q09167																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L21p	MOUSE	209	Q9D1N9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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L27e	MOUSE	136	P61358																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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L10p	RAT	317	P19945																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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L16p	RAT	251	Q5M818																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
L17p	RAT	176	Q6PDW6																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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4) Taxonomy complex

This page allows you to browse through a taxonomic tree that contains only the species present in the complex studied.

The screenshot shows the 'Taxonomy complex' interface. On the left is a sidebar with navigation links: Home, All proteins for one species, All species for one protein, Compare species, Taxonomy complex (selected), and Coevolution. The main area displays a taxonomic tree. The tree is expanded to show the 'Homo sapiens' node. Below the tree, a table lists protein data for Homo sapiens.

Protein	Species	Size	UniProt
S12e : RS12	HUMAN	132	P25398
L36e : RL36	HUMAN	105	Q9Y3U8
L36e : RL36X	HUMAN	105	P0C6E6
S27e : RS27L	HUMAN	84	Q71UM5
S27e : RS27	HUMAN	84	P42677
L10e : RL10L	HUMAN	214	Q96L21
L10e : RL10	HUMAN	214	P27635
L15e : RL13	HUMAN	204	P61313
S6e : RS6	HUMAN	249	P62753
L13e : RL13	HUMAN	211	P26373
S8e : NSA2	HUMAN	260	O95478
S8e : RS8	HUMAN	208	P62241
S15e : RT15	HUMAN	257	P82014

5) Coevolution

The Coevolution page is composed of two tabs.

A) Taxonomic tree tab

With this tab we have access to all species of database in a taxonomic tree. It is possible for each taxon to access a list of proteins for which at least one member of a taxon sequence. Beside each protein there is a checkbox, simply select proteins of interest for the taxon of your choice.

The screenshot shows the 'Taxonomic tree' tab in the Coevolution section. The interface has two tabs: 'Tree' (selected) and 'Alignment'. The 'Tree' tab displays a taxonomic tree. A red box highlights a list of proteins for the 'ribosome' taxon, each with a checkbox. The list includes: ribosome - L / [], ribosome - L15p [], ribosome - S7p [], ribosome - S19p [], ribosome - L34e [], ribosome - L19p [], and ribosome - L21p [].

In the Alignment tab, displays alignment division taxon specific sequences and protein selected. There is no limit to the number of different alignments that would have displayed. Each alignment corresponds to a taxon and a protein. The sequence alignment is pre-calculated.

Home

All proteins for one species

All species for one protein

Compare species

Taxonomy complex

Coevolution

Tree

Alignment

Alignment

X

S7p-Metazoa

X

S7p-Bacteria

Guide to use the consol Jmol

Load structure directly from the server :

load ./data/pdb/1K73.pdb

Select :

Select all :

select all

Select elements :

select carbon

Select chains :

select *:F

Select a type of amino acid :

select [HIS]

Select a type of amino acid of chain :

select [HIS]:F

Select a macromolecule :

select protein

Select a specific amino acid :

select 95:F

Change the display :

cpk on / cpk off

change the size of balls :

cpk 0.5

wireframe on

cartoon on

trace on

backbone on

motion :

move [x-rotation] [y-rotation] [z-rotation] [zoom-factor] [x-translation] [y-translation] [z-translation] [slab-cutoff] [seconds-total] [move-frames-per-second]{default: 30} [maximum-acceleration]{default: 5}

example :

move 10 180 90 0 0 0 0 5

change color :

color red

For more information

Jmol tutorial :

- <http://www.chem.uwec.edu/JmolTut/index.html>

Jalview tutorial :

- http://www.jalview.org/tutorial/TheJalviewTutorial_screen.pdf

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