

**Table S3: Clusters of single nucleotide binding sites.** The first column presents the cluster number according to the structure that originated the cluster. Columns 2-3 present the cluster size and the maximal SCOP distance between any two cluster members. Distance 3 means that the proteins belong to the same SCOP super family, while distance 7 indicates that the proteins have totally different overall structural folds. Distance 0 means that some of the annotations are missing and the distance can not be automatically calculated. Column 4 details the cluster members by their PDB code, protein and RNA chains and nucleotide identities (numbered according to their appearance on the RNA strand). Column 4 details the existing pre-SCOP superfamily annotations of the cluster members.

Num.	Clust. Size	Scop Dist.	Cluster Members	Pre-SCOP Annotation
<b>AND-set clusters</b>				
5	3	7	1jbrACG11 1f7uABA31 2j02NAC940	Microbial ribonucleases and Aminoacyl-tRNA synthetases and missing
6	3	0	2bh2ACA6 2dr8ABC15 1m90TAA58	missing and Ribosomal proteins S24e, L23 and L15e
9	2	0	1vqoQ9A11 1ffyATA37	missing and Aminoacyl-tRNA synthetases
16	2	0	1u0bBAA21 2j01PAA173	Aminoacyl-tRNA synthetases and missing
25	2	0	1mmsACU11 2j02LAG495	Ribosomal protein L11 and missing
28	1	N/A	2j011AG182	missing
32	6	7	2j016AA2104 1vqoN9A11 1m90CAC1831 1m90MAA155 2j02NAG1161 1m903AG1377	missing and Translation proteins SH3-like and Ribosomal proteins L15p and L18e and Ribosomal protein L39e
34	3	0	2j017AG427 2j02PAA573 1xokCAG3	missing
35	2	0	2j017AA749 2j018AG2200	missing
36	3	0	2j018AG219 1m90XAA931 2j01FAU1103	missing and Ribosomal protein L30p/L7e
38	1	N/A	2j01DAA744	missing
41	1	N/A	2j01DAA1454	missing
42	1	N/A	2j01DAG1667	missing
44	8	7	2j01DAA1828 1s03HAU28 2j02LAC528 2j01EAG1889 2j01VAA513 2j02CAU399 1a9nBQC17 1m902AG1796	Ribosomal protein S8 and RNA-binding domain and Zn-binding ribosomal proteins and missing
50	9	7	2j01FAA412 2hvyAEU45 2j01EAU1030 1m90DAU2677 1oaaACG8 2j01RAA1185 1lngABU25 2j01PAU2224 1m901AU1613	Translation proteins and E set domains and SRP19 and Zn-binding ribosomal proteins and missing
51	1	N/A	2j01FAG629	missing
54	1	N/A	2j01FAG1146	missing
55	5	0	2j01FAU1153 2j01DAA1386 2j01NAC947 1m90DAA2559 2j015AG1913	Translation proteins and missing
58	1	N/A	2j01IAA2026	missing
60	2	0	2j01NAG2598 1m90HAG235	missing and L30e-like
66	4	7	2j01QAG2300 1m904AU2167 1qtqABA70 2j02JAU1085	missing and Zn-binding ribosomal proteins and Ribosomal protein L25-like
70	1	N/A	2j01RAA2539	missing

76	2	0	2j01UAC947 2j0sTEU1	missing
81	2	0	2j01WAG459 2j015AA2395	missing
84	2	0	2j01WAA1498 1m901AG1563	missing and Zn-binding ribosomal proteins
86	5	0	2j01XAU1239 2j01FAG761 2j01UAG1146 1m90CAA874 2j02GAU1340	missing and Translation proteins SH3-like domain
87	4	0	2j02BAA1061 2j02DAA4 1ooaACG23 2j01EAA2551	missing and E set domains
92	1	N/A	2j02GAG659	missing
95	1	N/A	2j02GAA1336	missing
97	2	0	2j02HAA619 1m90NAG370	missing and Ribosomal proteins S24e, L23 and L15e
99	5	7	2j02JAA935 2j01HAC2484 1m90GAC2407 2j012AU66 1r3eACC11	Ribosomal protein L6 and PUA domain-like and missing
101	3	0	2j02KAG684 2j02QAC530 1m90CAG2097	missing and Translation proteins SH3-like
107	1	N/A	2j02MYA12	missing
109	7	7	2j02NAU1009 2j02EAA1357 1m90QAC1667 1m90NAC1823 2j01WAA711 1m90SAA832 2j01RAA2664	Ribosomal protein L19 (L19e) and Ribosomal proteins S24e, L23 and L15e and Ribosomal protein L22 and missing
116	2	0	2j02UAA1245 2j02CAA498	missing
117	3	0	2ipyACU6 2j01TAG2681 2j01FAA1917	missing
119	1	N/A	2ipyACU19	missing
122	3	7	1m902AU765 1m90EAG661 2j01EAA2634	Zn-binding ribosomal proteins and Ribosomal protein L4 and missing
123	3	0	1m902AU1433 2j02GAU1199 2j01OAA1809	Zn-binding ribosomal proteins and missing
125	1	N/A	1m903AA50	Ribosomal protein L39e
126	3	0	1m903AC78 2j01DAG1396 2j02TAC177	Ribosomal protein L39e and missing
129	3	0	1m904AU385 2j01TAC1620 2j01RAA2523	Zn-binding ribosomal proteins and missing
131	1	N/A	1m904AA2222	Zn-binding ribosomal proteins
137	1	N/A	1m90CAA1900	Translation proteins SH3-like domain
140	1	N/A	1m90DAA1691	Translation proteins
143	1	N/A	1m90EAA438	Ribosomal protein L4
145	1	N/A	1m90EAG748	Ribosomal protein L4
146	7	7	1m90EAA882 2j01SAG2152 2j01EAA2390 1m904AC2269 1m90IAA1110 2j02LAA489 2j01TAU2663	Ribosomal protein L4 and Zn-binding ribosomal proteins and Ribosomal protein L10 and missing
147	3	0	1m90EAA1312 2j01DAG1682 2j01XAA65	Ribosomal protein L4 and missing
148	9	7	1m90EAU1319 1ytuACA1 2bg- gAPU1 2j01RAA1173 1m90OAA2195 1m904AA2310 1m903AA451 1m90GAA2633 2j01PAU771	Ribosomal protein L4 and Translational machinery components and Zn-binding ribosomal proteins and Ribosomal protein L39e and Ribosomal protein L6 and missing

149	4	7	1m90FAA2187 1u0bBAA36 2asbABU9	1m90WAA87	Ribosomal protein L5 and Ribosomal protein L29 (L29p) and Aminoacyl-tRNA synthetases and missing
154	1	N/A	1m90KAG1079		Ribosomal protein L13
159	1	N/A	1m90MAG733		Ribosomal proteins L15p and L18e
161	1	N/A	1m90NAG164		Ribosomal proteins S24e, L23 and L15e
163	7	7	1m90NAA1430 2j02TAG97 1m90CAG865 1mzpABG37 2j02PAA352	2j02IAC1107 2j01UAA961	Ribosomal proteins S24e, L23 and L15e and Translation proteins SH3-like and Ribosomal protein L1 and missing
166	8	7	1m90OAA2210 1m90MAA689 ACA19 2bteABU20 2ipyACC8 2f8kABG9 1m90LAC1940 1gaxACC37	1gax-	Translational machinery components and Ribosomal proteins L15p and L18e and tRNA-binding arm and Ribosomal protein L14
168	1	N/A	1m90QAA1556		Ribosomal protein L19 (L19e)
170	1	N/A	1m90RAC2234		Translation proteins SH3-like domain
175	3	7	1m90VAU2706 2j02LAC484	1k8wABC14	Glucocorticoid receptor-like and PUA domain-like and missing
176	10	7	1m90VAA2730 2j016AU2162 2j01QAG2068 1m90DAU1194 1m90UAC22 1m90UAA320	1qf6ABA34 2j02GAA1305 1m90MAU892 1m90XAG577	Glucocorticoid receptor-like and Class II aaRS ABD-related and Ribosomal proteins L15p and L18e and Translation proteins and Ribosomal protein L30p/L7e
180	9	7	1m90ZAG1275 1m90KAG2655 2j01WAG1164 1qvg23C2 1jbsACG4 2j02MAU1261	2j01UAA1055 1m90PAA648 2bu1ARA10	Ribosomal protein L32e and Ribosomal protein L13 and Ribosomal proteins L15p and L18e and Zn-binding ribosomal proteins and Microbial ribonucleases and missing
181	2	0	2gjwAEA12 2pjpABU6		missing
<b>OR-set clusters</b>					
0	1	N/A	2asbABU9		missing
1	1	N/A	1k8wABC14		PUA domain-like
2	1	N/A	1jbsACG4		Microbial ribonucleases
3	4	N/A	2f8kABG9 2j02BAA1061 2ipyACC8	1lngABU25	missing and SRP19
7	1	N/A	1f7uABA31		Aminoacyl-tRNA synthetases
8	1	N/A	1qtqABA70		Ribosomal protein L25-like
9	1	N/A	2pjpABU6		missing
11	3	N/A	2hvyAEU45 2gjwAEA12 10oaACG8 2bu1ARA10 1mmsACU11	2bh2ACA6	missing
12	3	7			E set domains and Ribosomal protein L11 and missing
13	1	N/A	10oaACG23		E set domains
15	2	7	1mzpABG37 1ffyATA37		Ribosomal protein L1 and Aminoacyl-tRNA synthetases
16	1	N/A	2j011AG182		missing
18	1	N/A	2ipyACU6		missing
20	1	N/A	2ipyACU19		missing

21	1	N/A	1m901AG1563	Zn-binding ribosomal proteins
22	1	N/A	1m901AU1613	Zn-binding ribosomal proteins
24	1	N/A	1qf6ABA34	Class II aaRS ABD-related
25	1	N/A	1xokCAG3	missing