## PDB1: 1pho\_A

## PDB2: 3sys\_A

## row number: 0

1pho\_A 000 GDGFGTSLTYDFGGSDFAISGAYTNSDRTNEQNLQSRGTGKRAEAWATGLKYDA--N--NIYLATFYSETRKMTPITGGFANKTQNFEAVAQYQFDFGLR 096

3sys\_A 000 DGFNYAGAEYRFNRERTQLGLWHGQLEDV-------------YRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAAR-AGEIDSHTVYGLFSAGIG-LHT 085

1pho\_A 097 PSLGYVLSKGKDIE-------G----I------GDEDLVNYIDVGATYYFN----KNMSAFVDYKINQLDS 146

3sys\_A 086 FYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNAT 156

## PDB1: 2fgr\_A

## PDB2: 5dl8\_B

## row number: 1

2fgr\_A 000 VGRYIGGYVAYDNGPLSASLGLAQQKTAVG--------G------------LATDRDEITLGASYNFG----VAKLSGLLQQTKFKRDI-GGDIKTNSYM 075

5dl8\_B 000 DAENIGLLETVKVKNHTFGLGYQQIIGESAYPLPDGFLPETYFINWNATGFFKEDEKSYHVMYGYDFKDYIPGLNAMVKYVYGHDFKAANGEKNHETESN 100

2fgr\_A 076 LGASAPVG----GVGEVKLQYALYDQKAIDSKAHQITLGYVHNL 115

5dl8\_B 101 VILNYAFQQPLLKGFALQYIRIDYNVKH-GNDFGEDRLFVNYTK 143

## PDB1: 2por\_A

## PDB2: 5dl6\_A

## row number: 2

2por\_A 000 QEMAVAAAYT--FG-NYT--VGLGYEKIDSPDT--ALMADMEQLELAAIAKFGATNVKAYYADGELDRDFARAVFDLTP-----V---AAAATAVDHKAY 085

5dl6\_A 000 NQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAKAGLVDNDLYHAHFELKHQNHKFIFGTFQHHGDTAFP---YLTGGETGLLIDTWPGEFLNPKEKAY 097

2por\_A 086 GLSVDSTFG---A-TTVGGYVQVLDID-------TIDDVTYYGLGASYDLG----GGASIVGGIADNDLPN-------SDMVADLGVKFKF 154

5dl6\_A 098 SFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKERETDFDLGYTVQSGWLKNLGLRARYAIYDNNMLSTANIKPVNETRINIDYTW 188

## PDB1: 2por\_A

## PDB2: 5ldv\_A

## row number: 3

2por\_A 000 ADMEQLELAAIAKF-GATNVKAYYADGELDRDFARAVFDLTPVAAAATAVDHKAYGLSVDSTFGA-TTVGGYVQVLDIDT------IDDVTYYGLGASYD 92

5ldv\_A 000 GRNIFGYVTGGYTFNETVRVGADFVYGGTKTEAT----------THLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNLDQGVNTNESADHSTVRLQALYK 90

## PDB1: 3wi5\_A

## PDB2: 5dl6\_A

## row number: 4

3wi5\_A 000 ESYHAGFNYKNG---GFFVQYGGAYKRHHQVQEG-LNIEKYQIHRLVSGYDNDALYASVAVQQQDAKLTD------A-----S-----NSHNSQTEVAAT 080

5dl6\_A 000 NQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAKAGLVDNDLYHAHFELKHQNHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFR 100

3wi5\_A 081 LAYRFG---N-VTPRVSYAHGFKGLVAK-ADIGNRYDQVVVGAEYDFS----KRTSALVSAGWLQEGKGE--NKFVATAGGVGLRHKF 157

5dl6\_A 101 YEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKERETDFDLGYTVQSGWLKNLGLRARYAIYDNNMLSTANIKPVNETRINIDYTW 188

## PDB1: 4frx\_A

## PDB2: 6ehb\_A

## row number: 5

4frx\_A 000 VDNRAFSGLFTYTVS--GHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKF-QRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIKTARG 097

6ehb\_A 000 NGEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEY-MLAASYRM-ENLYFAGLFTDGELAKDVDYTGYELAAGYKLGQ-----AAFTATYNNAETAK---- 089

4frx\_A 098 DQSEWERDISLAYVIPDGTFKGLGFTWKNASFRSGLPAAGSSNNQRDQDENRLIVSYTL 156

6ehb\_A 090 KTSADNFAIDATYYFK----PNFRSYISYQFNLLDSDKA---SKVASEDELAIGLRYDF 141

## PDB1: 4fsp\_A

## PDB2: 5nxr\_A

## row number: 6

4fsp\_A 000 DNRSFSGSLTYRLRN-GQAFGLGYQRMSGDHGFPYLEGTDPYLVNFGQYNDFAEAGESSWQLRYDCDFAPLGVPGLSLMTRYFSGHGAKPKG---ADGSR 096

5nxr\_A 000 NGDGYGFSTAYEL-GWGVTLGGGYSSSSRTPNQKAGVVTSE-GD---SYYSATGKRAQAWNVGGKFDAN-----NVYLAAMYGQTQNTSRYGDLDLIANK 090

4fsp\_A 097 EWERDSDLRYVLQGGALKGLGLVWRNATYRSAF-------SRDIDENRLYLTYEL 144

5nxr\_A 091 TENVELVAQYLFD----FGLKPSIGYNQSKGKNLGNGYDNQDLVKYISVGSYYYF 141

## PDB1: 2fgr\_A

## PDB2: 3szd\_A

## row number: 7

2fgr\_A 000 DRDEITLGASYNFGVAKLSGLLQQTKFKRD---------I---G-------GDIKTNSYMLGASAPVG----GVGEVKLQYALYDQKA-----IDSKAHQ 072

3szd\_A 000 DNRTVSALFSARYGLHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHVRLAGVTDDGSEWG 100

2fgr\_A 073 ITLGYVHNLS----KRTALYGNLAFLKNKD 98

3szd\_A 101 RESELGYTLQSGAFKRLNVRWRNSSQRRDW 130

## PDB1: 2y0l\_A

## PDB2: 5mdo\_A

## row number: 8

2y0l\_A 000 DNKSLNGMFTYSLGNHAFGAAWQRMNGDDAFPYLEGSNPYLVNFVQVNDFAGPKERSWQLRYDYDFVGLGIPGLTFMTRYVKGDNVELAGQSGEGREWER 100

5mdo\_A 000 DDYWGGIAAHYKLGPLQLDAAYEGNRNIEAE-----------G-------QTWENNTYLVGVQGWFE----NGISFFAQYKYMEADASN--GVNEKQDAM 076

2y0l\_A 101 NTELQYVFQSGALKNLGIRWRNATFRSN-------FTRDIDENRLIVSYTL 144

5mdo\_A 077 SAGLMYTTG----D-WQYKLGYAANFDLERDGKTLSNTSDDVVSAQIMYFV 122

## PDB1: 2y0l\_A

## PDB2: 5mdo\_A

## row number: 9

2y0l\_A 000 FDLGGLDYKLTDQLTASYHYSNLQDV--------YRQHFVGLLHSWPIGPGELTSDLRFARSTDSGSAKAGGIDNKSLNGMFTYSLGNHAFGAAWQRMNG 092

5mdo\_A 000 WGGIAAHYKL-GPLQLDAAYEGNRNIEAEGQTWENNTYLVGVQGWFE---NGISFFAQYKYMEADASN-GVNEKQDAMSAGLMYTTGDWQYKLGYAANFD 095

2y0l\_A 093 DDAFPYLEGSNPYLVNFVQVNDFAGPKERSWQLRYDYDFVGLGIPGLTFMTRYVKGDNV 151

5mdo\_A 096 LERD----G------K-----TLSNTSDDVVSAQIMYFVD----PSAVLYARARMNDFN 135

## PDB1: 2y0l\_A

## PDB2: 5mdo\_A

## row number: 10

2y0l\_A 000 VGLLHSWPIGPGELTSDLRFARSTDSGSAKAGGIDNKSLNGMFTYSLG-NHAFGAAWQRMNGDDAFPYLEGSNPYLVNFVQVNDFAGPKERSWQLRYDYD 099

5mdo\_A 000 IAAHYKL--G--PLQLDAAYEGNRNIEAE-GQTWENNTYLVGVQGWFENGISFFAQYKYMEADASN-----------G-------VNEKQDAMSAGLMYT 077

2y0l\_A 100 FVGLGIPGLTFMTRYVKGDNVELAG-QSGEGREWERNTELQYVFQSGALKNLGIRWRNATFRSN 162

5mdo\_A 078 TG----D-WQYKLGYAANFDLERDGKTLSNTSDDVVSAQIMYFVD----PSAVLYARARMNDFN 132

## PDB1: 2zfg\_A

## PDB2: 5dl8\_B

## row number: 11

2zfg\_A 000 NGDGVGGSISYEYEGFGIVGAYGAADRTNLQE-A---QP--L--------GNGKKAEQWATGLKYDAN----NIYLAANYGETRNATPITNKFTNTSGFA 082

5dl8\_B 000 DAENIGLLETVKVKNHTFGLGYQQIIGESAYPLPDGFLPETYFINWNATGFFKEDEKSYHVMYGYDFKDYIPGLNAMVKYVYGHDFKAAN-------GEK 093

2zfg\_A 083 NKTQDVLLVAQYQF--D--FGLRPSIAYTKSKAKDVEGIGDVDLVNYFEVGATYYF 134

5dl8\_B 094 NHETESNVILNYAFQQPLLKGFALQYIRIDYNVKH------GNDFGEDRLFVNYTK 143

## PDB1: 3szd\_A

## PDB2: 6ehd\_A

## row number: 12

3szd\_A 000 KLDNRTVSALFSARYGLHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHVRLAGVTDDGSE 100

6ehd\_A 000 DVTNSYFEVTGEYTIGDALIGVTYYNAELDVEN--------N----------PLVIDEDAISVAGTYKVA----DKTKLYAGYEYVMQEANT--GADEDG 076

3szd\_A 101 WGRESELGYTLQSGAFKRLNVRWRNSSQRRDW 132

6ehd\_A 077 TLVYLGVEYKF----ASWARVYAEYGYGDGTT 104

## PDB1: 4d65\_A

## PDB2: 5dl6\_A

## row number: 13

4d65\_A 000 NGDGYGFSTAYELGWGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLEL--D---ELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYS 095

5dl6\_A 000 TDGLYYLGGNYQFNPALKLTAFYMDVDD--------------LYNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAK-----AGLVDNDLYHAHFELK 081

4d65\_A 096 FDFGLTPSIGYNQSKGKNLG------N----------YGNKDLVKYIAVGASYDFN---KNMAAVIDYKINLL 149

5dl6\_A 082 HQ-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHN 153

## PDB1: 4fso\_A

## PDB2: 5mdo\_A

## row number: 14

4fso\_A 000 DNRALSLLLAYAQG-GHTLSAGWQRMNGASSMPYLDGSNPYLANYLQVNDFANPEERSWQLRYDFDLRSVGVPGLSFMTRYVNGDHIRLA--NGDEGKEW 097

5mdo\_A 000 ENNTYLVGVQGWFENGISFFAQYKYMEADASN------------------GVNEKQDAMSAGLMYTTG----D-WQYKLGYAANFDLERDGKTLSNTSDD 077

4fso\_A 098 ERDIELKYIVQSGRFKDLSLRLRNATYRTDFER------------SARDVDEVRLIASYNL 146

5mdo\_A 078 VVSAQIMYFVD----PSAVLYARARMNDFNEGLDGLDDAARWTSGTNGDYNEYSVGVEYYF 134

## PDB1: 5dl7\_A

## PDB2: 5nxr\_A

## row number: 15

5dl7\_A 000 TDSFYTLGGSYQLK-DYRLRAYHAELKDI----------------------YQQQFLGFNGKQPLNDQLNFLSDVRFFNSEETGSKK---IGEVDNRHIS 074

5nxr\_A 000 NGDGYGFSTAYELGWGVTLGGGYSSSSRTPNQKAGVVTSEGDSYYSATGKRAQAWNVGGKFDAN-----NVYLAAMYGQTQNTSRYGDLDLIANKTENVE 095

5dl7\_A 075 GLFGLNYQ-NHTVSLGYMQSFGSTGLPFLSGTESPVVLDFMSSDYSNKDEKVYSIRYEYDFKNARIGDVSLNGLRFMTRYAKGEDID 160

5nxr\_A 096 LVAQYLFDFGLKPSIGYNQSKGKNLG------NG----Y-----DNQDLVKYISVGSYYYFNK---------NMSAVVDYKINLLKD 158

## PDB1: 5dl7\_A

## PDB2: 6ehb\_A

## row number: 16

5dl7\_A 000 DSFYTLGGSYQLK--DYRLRAYHAELKDIYQQQFLGFNGKQPLNDQLNFLSDVRFFNSEETGSKKIGEVDNRHISGLFGLNYQNHTVSLGYMQSFGSTGL 098

6ehb\_A 000 EDGYSLSAIYTFGDTGFNVGAGYADQD-DQNEYMLAASYRME-----NLYFAGLFTDGELAK-----DVDYTGYELAAGYKLGQAAFTATYNNAETAK-- 087

5dl7\_A 099 PFLSGTESPVVLDFMSSDYSNKDEKVYSIRYEYDFKNARIGDVSLNGLRFMTRYAKGEDIDLLQYGDQRFKEDSLEFDLGYKI 181

6ehb\_A 088 --------------------KTSADNFAIDATYYFKP---------NFRSYISYQFNLLDSDKA--SKVASEDELAIGLRYDF 139

## PDB1: 1pho\_A

## PDB2: 4frx\_A

## row number: 17

1pho\_A 000 NGDGFGTSLTYDFGGSDFAISGAYTNSDRTNEQNLQSRGTGKRAEAWATGLKYDA--N--NIYLATFYSETRKMTPIT-------------------GGF 077

4frx\_A 000 SNKFYYAGGDYKVNK-DLTLQYYYGNLDDF-------------YKQHFLGLIHNWQIGPGVLKTDLRAFDSSSDGKNGSRSGRADGYVSSGYYGSGVTKG 086

1pho\_A 078 ANKTQNFEAVAQYQFDFGLRPSLGYVLSKGKDIE----------G-----I------GDEDLVNYIDVGATYYFN----KNMSAFVDYKINQLDS 147

4frx\_A 087 EVDNRAFSGLFTYTVS-GHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIK 180

## PDB1: 2zfg\_A

## PDB2: 5dl7\_A

## row number: 18

2zfg\_A 000 NGDGVGGSISYEYEGFGIVGAYGAADRTNLQE-----AQP---L-----GNGKKAEQWATGLKYDAN----------NIYLAANYGETRNATPITNKFTN 077

5dl7\_A 000 DNRHISGLFGLNYQNHTVSLGYMQSFGSTGLPFLSGTESPVVLDFMSSDYSNKDEKVYSIRYEYDFKNARIGDVSLNGLRFMTRYAKGEDIDLLQY---- 096

2zfg\_A 078 TSGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEGIGDVDLVNYFEVGATYYF 134

5dl7\_A 097 -GDQRFKEDSLEFDLGYKIPEGKLKGLGMRARFSHYRNDMPTN-MTFHSANETRLNVDYTF 155

## PDB1: 3jty\_A

## PDB2: 4d65\_A

## row number: 19

3jty\_A 000 DRFNFQGAEYAFNDKRTQIALWNAQLKDI--------------YSQQFINLIHSQPLGDWTLGANLGFFYGKEDGSAR-----AGDMENRTWSGLFSAKY 081

4d65\_A 000 GDGYGFSTAYELGW-GLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLEL--D--ELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYSF 095

3jty\_A 082 G-GNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNV 155

4d65\_A 096 DFGLTPSIGYNQSKGKNLG------N-----Y------GNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLK 149

## PDB1: 3t0s\_A

## PDB2: 6ehd\_A

## row number: 20

3t0s\_A 000 EFNLAGATYAFTPRLSASYYYGQLKDI---------------------YRQHYLGLLHTLPLGEGLSLRSDLRYFDSGEDGAAISGPVDNRNLNAMLTLR 079

6ehd\_A 000 ELAELYVGATF-GDLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTIG-----DALIGVTYYNAELDVENNPLVIDEDAISVAGTYK 094

3t0s\_A 080 AG-AHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDI 154

6ehd\_A 095 VADKTKLYAGYEYVMQEANT-------------------GADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGT 147

## PDB1: 4d65\_A

## PDB2: 4frx\_A

## row number: 21

4d65\_A 000 NGDGYGFSTAYELGWGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLEL--D--ELYLAAMYGQTLNTTRFGDDD---------------AEAI 081

4frx\_A 000 SNKFYYAGGDYKVNKDLTLQYYYGNLDDF--------------YKQHFLGLIHNWQIGPGVLKTDLRAFDSSSDGKNGSRSGRADGYVSSGYYGSGVTKG 086

4d65\_A 082 ANKTENLELVALYSFDFGLTPSIGYNQSKGKNLG----------N-----Y------GNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLKD 151

4frx\_A 087 EVDNRAFSGLFTYTVS-GHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIK 180

## PDB1: 4d65\_A

## PDB2: 4ft6\_A

## row number: 22

4d65\_A 000 NGDGYGFSTAYELGWGLSIGGGYSNSSRTPSQN-------NI-K----TGATGKRAEAWNVGSKLELD-----ELYLAAMYGQTLNTTRFGDDDAEAIAN 083

4ft6\_A 000 ENRALTGFFSATRG-GHSLGAGYQRMYGDDGMLYIAGTSTPLVNDIQVRNFTSAGERSWQLRYDYDFVALGIPGLTAMARYASGAHARTKA-----MDDG 094

4d65\_A 084 KTENLELVALYSFD----FGLTPSIGYNQSKGKNLGNYGNKDLVKYIAVGASYDF 134

4ft6\_A 095 RAWERDVDVAYVIQSGPLKNLGLRWRNAMLRSNH------AADVDENRLILSYSL 143

## PDB1: 4frt\_A

## PDB2: 6ehd\_A

## row number: 23

4frt\_A 000 RFDFAGGTYRWSERLSSSYHYANLED---------------------FYRQHHLGVQHLLPLADDQSLKSDIRWARSTDEGG---SRVNNRALNALFTYR 076

6ehd\_A 000 ELAELYVGATF-GDLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTIG-----DALIGVTYYNAELDVENNPLVIDEDAISVAGTYK 094

4frt\_A 077 LG-GHAFGLGYQRMSGDSGFAYLAGTDPYLVNFVQIGDFANKDERSWQLRYDYDFAAIGLPGLTFMSRYLRGEHI 150

6ehd\_A 095 VADKTKLYAGYEYVMQEANT----------G--------ADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGT 147

## PDB1: 2zfg\_A

## PDB2: 3sy9\_A

## row number: 24

2zfg\_A 000 KKAEQWATGLKYDANNIYLAANYGETRNATPITNK------FTN-----TSGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDV----EG---- 077

3sy9\_A 000 IDNNTYSLHFAVGYRQHTVTAVLQKVNGNTPFDYINQGDSIFLDNSQQYSDFNGPNEKSWKLQYDYDFVALGVPGLSASASYSRGKLDLTRVDPDSPGYG 100

2zfg\_A 078 -----IGDVDLVNYFEVGATYYFN----KNMSTYVDYIINQIDS 112

3sy9\_A 101 GWYSADGKNAKHWERDLDLQYVVQGGPAKDLSLRLRWATHRGTG 144

## PDB1: 3nsg\_A

## PDB2: 3t0s\_A

## row number: 25

3nsg\_A 000 NGDGVGYTMAYEF-DGFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDA--N---NVYLAAVYAETRNMSIVENTVTDTVEMANKTQNLEVVAQYQ 094

3t0s\_A 000 SDEFNLAGATYAFTPRLSASYYYGQLKDI------------YRQHYLGLLHTLPLGEGLSLRSDLRYFDSGEDGAAI-------SGPVDNRNLNAMLTLR 081

3nsg\_A 095 FDFGLRPAISYVQSKGKQLN----G--A----G------GSADLAKYIQAGATYYFN----KNMNVWVDYRFNLLD 150

3t0s\_A 082 AGA-HAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDI 156

## PDB1: 3prn\_A

## PDB2: 5dl6\_A

## row number: 26

3prn\_A 000 VTEEFGIAADWSNDMISLAAAYTTDAGGIVDNDIAFVGAAYKFNDA--GTVGLNWYDNGLSTAGDQVTLYGNYAFG---A-TTVRAYVSDIDR------- 087

5dl6\_A 000 DNDLYHAHFELKHQNHKFIFGTFQHHGD----TAF----PYLTGGETGLLIDTWPGEFL-NPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLG 091

3prn\_A 088 --AGADTAYGIGADYQFA----EGVKVSGSVQSG 115

5dl6\_A 092 GTNLKERETDFDLGYTVQSGWLKNLGLRARYAIY 125

## PDB1: 3t0s\_A

## PDB2: 5nxr\_A

## row number: 27

3t0s\_A 000 DEFNLAGATYAFTPRLSASYYYGQLKDI----------------------YRQHYLGLLHTLPLGEGLSLRSDLRYFDSGEDGAAI---SGPVDNRNLNA 075

5nxr\_A 000 GDGYGFSTAYELGWGVTLGGGYSSSSRTPNQKAGVVTSEGDSYYSATGKRAQAWNVGGKFDAN-----NVYLAAMYGQTQNTSRYGDLDLIANKTENVEL 095

3t0s\_A 076 MLTLRAG-AHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDI 155

5nxr\_A 096 VAQYLFDFGLKPSIGYNQSKGKNLG------NG----Y------DNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLK 156

## PDB1: 3t0s\_A

## PDB2: 6ehd\_A

## row number: 28

3t0s\_A 000 VDNRNLNAMLTLRAGAHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGAGRADDSEW 100

6ehd\_A 000 VTNSYFEVTGEYTIGDALIGVTYYNAELDVEN-------N-----------PLVIDEDAISVAGTYKVA----DKTKLYAGYEYVMQEANT--GADEDGT 076

3t0s\_A 101 ERNTDLSYVIQSGPLKSVALKWRNITYRSR 130

6ehd\_A 077 LVYLGVEYKFA----SWARVYAEYGYGDGT 102

## PDB1: 3t24\_A

## PDB2: 6ehd\_A

## row number: 29

3t24\_A 000 FDFAGGSYKWTDNLSTSYHYGKLDN---------------------FYKQHYLGLVHTLPIADKQSLKSDIRWARSTDDGS---SNVDNKALNAMFTYSL 076

6ehd\_A 000 LAELYVGATF-GDLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTIG-----DALIGVTYYNAELDVENNPLVIDEDAISVAGTYKV 094

3t24\_A 077 G-YHAFGVGYQKMSGDTGFAYINGADPYLVNFIQIGDFANKDEKSWQARYDYNFAGVGIPGLTFMTRYVKGDNI 149

6ehd\_A 095 ADKTKLYAGYEYVMQEANT----------G--------ADEDGTLVYLGVEYKFAS----WARVYAEYGYGDGT 146

## PDB1: 4ft6\_A

## PDB2: 5nxr\_A

## row number: 30

4ft6\_A 000 ENRALTGFFSATRG-GHSLGAGYQRMYGDDGMLYIAGTSTPLVNDIQVRNFTSAGERSWQLRYDYDFVALGIPGLTAMARYASGAHARTKA---MDDGRA 096

5nxr\_A 000 NGDGYGFSTAYELGWGVTLGGGYSSSSRTPNQKAGVVT-SEGDS---YYSATGKRAQAWNVGGKFDAN-----NVYLAAMYGQTQNTSRYGDLDLIANKT 091

4ft6\_A 097 WERDVDVAYVIQSGPLKNLGLRWRNAMLRSNH-------AADVDENRLILSYSL 143

5nxr\_A 092 ENVELVAQYLFD----FGLKPSIGYNQSKGKNLGNGYDNQDLVKYISVGSYYYF 141

## PDB1: 5dl7\_A

## PDB2: 5fvn\_A

## row number: 31

5dl7\_A 000 DNRHISGLFGLNYQ-NHTVSLGYMQSFGSTGLPFLSGTESPVVLDFMSSDYSNKDEKVYSIRYEYDFKNARIGDVSLNGLRFMTRYAKGEDIDLLQYGDQ 099

5fvn\_A 000 NGDGVGGSITYNLGEGFGIGTAVSSSKRTSSQN------DL--TY-----GNGDRAETYTGGLKYDAN----------NIYLAAQYTQTYNATRVGNLGW 077

5dl7\_A 100 RFKEDSLEFDLGYKIPEGKLKGLGMRARFSHYRNDMPTN--MTFHSANETRLNVDYTF 155

5fvn\_A 078 ANKAQNFEVVAQYQFD----FGLRPSVAYLQSKGKDLENGYGDQDLLKYVDVGATYYF 131

## PDB1: 2fgr\_A

## PDB2: 3sy9\_A

## row number: 32

2fgr\_A 000 DRDEITLGASYNFGVAKLSGLLQQTKFKRDI-------------------GGDIKTNSYMLGASAPVG----GVGEVKLQYALYDQKA------------ 065

3sy9\_A 000 DNNTYSLHFAVGYRQHTVTAVLQKVNGNTPFDYINQGDSIFLDNSQQYSDFNGPNEKSWKLQYDYDFVALGVPGLSASASYSRGKLDLTRVDPDSPGYGG 100

2fgr\_A 066 ------IDSKAHQITLGYVHNLS----KRTALYGNLAFLKNKD 98

3sy9\_A 101 WYSADGKNAKHWERDLDLQYVVQGGPAKDLSLRLRWATHRGTG 143

## PDB1: 3prn\_A

## PDB2: 4frx\_A

## row number: 33

3prn\_A 000 VTEEFGIAADWSNDMISLAAAYTTDAGGIVDNDIAFVGAAYKFND-AGTVGLNWYDNGLSTAGDQVTLYGNYAFG----A-TTVRAYVSDIDR------A 088

4frx\_A 000 DNRAFSGLFTYTVSGHSIGAGYQILNGDS--DFPFLNRGDGEGSTAYLITDVQIGKFQR-AGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIKTARGD 097

3prn\_A 089 GADTAYGIGADYQFA----EGVKVSGSVQSG 115

4frx\_A 098 QSEWERDISLAYVIPDGTFKGLGFTWKNASF 128

## PDB1: 3sy7\_A

## PDB2: 4d65\_A

## row number: 34

3sy7\_A 000 KSADFIGGRYAITDNLSASLYGAELED--------------IYRQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKAK-----AGDISNTTWSLAAAYTL 081

4d65\_A 000 GDGYGFSTAYELGWGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLELD-----ELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYSF 095

3sy7\_A 082 D-AHTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQYSDFNGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDID 164

4d65\_A 096 DFGLTPSIGYNQSKGKNL--------------G--N---Y------GNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLKD 150

## PDB1: 3szv\_A

## PDB2: 5mdo\_A

## row number: 35

3szv\_A 000 DNRAFGALFSLRLG-AHAVAAGYQRISGDDPYPYIAGSDPYLVNFIQIGDFGNVDERSWQLRYDYDFGALGLPGLSFMSRYVSGDNVARG--AANDGKEW 097

5mdo\_A 000 ENNTYLVGVQGWFENGISFFAQYKYMEADASN-----------G-------VNEKQDAMSAGLMYTTG----D-WQYKLGYAANFDLERDGKTLSNTSDD 077

3szv\_A 098 ERNTDLGYVVQSGPLKNLGVKWRNATVRSNF---------------ANDLDENRLILSYSL 143

5mdo\_A 078 VVSAQIMYFVD----PSAVLYARARMNDFNEGLDGLDDAARWTSGTNGDYNEYSVGVEYYF 134

## PDB1: 4ft6\_A

## PDB2: 5mdo\_A

## row number: 36

4ft6\_A 000 ENRALTGFFSATRGGHSLGAGYQRMYGDDGMLYIAGTSTPLVNDIQVRNFTSAGERSWQLRYDYDFVALGIPGLTAMARYASGAHARTKAMDDGRAWERD 100

5mdo\_A 000 DDYWGGIAAHYKLGPLQLDAAYEGNRNIEAE------------------GQTWENNTYLVGVQGWFE----NGISFFAQYKYMEADASN-GVNEKQDAMS 077

4ft6\_A 101 VDVAYVIQSGPLKNLGLRWRNAMLRSNH-------AADVDENRLILSYSL 143

5mdo\_A 078 AGLMYTTG----D-WQYKLGYAANFDLERDGKTLSNTSDDVVSAQIMYFV 122

## PDB1: 5dl5\_A

## PDB2: 5fvn\_A

## row number: 37

5dl5\_A 000 EKTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRN-VTD 099

5fvn\_A 000 GDRAETYTGGLKYDANNIYLAAQYTQTYNATRVG--------N-----L-----GWANKAQNFEVVAQYQFD-----FGLRPSVAYLQSKGKDLENGYGD 077

5dl5\_A 100 DAQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQG--AYIGDTNEWRIFLDIPV 156

5fvn\_A 078 QDLLKYVDVGATYYFN----KNMSTYVDYKINLLDDKEFTRNAGISTDDIVALGLVYQF 132

## PDB1: 2fgr\_A

## PDB2: 3t0s\_A

## row number: 38

2fgr\_A 000 DRDEITLGASYNFGVAKLSGLLQQTKFKRD-------I------------GGDIKTNSYMLGASAPVG----GVGEVKLQYALYDQKA-----IDSKAHQ 072

3t0s\_A 000 DNRNLNAMLTLRAGAHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGAGRADDSEWE 100

2fgr\_A 073 ITLGYVHNLS----KRTALYGNLAFLKNK 97

3t0s\_A 101 RNTDLSYVIQSGPLKSVALKWRNITYRSR 129

## PDB1: 2zfg\_A

## PDB2: 3sy7\_A

## row number: 39

2zfg\_A 000 DGVGGSISYEYE-----GFGIVGAYGAADRTNLQEAQPLGNGKKAEQWATGLKYDANNIYLAANYGETRNATPITN-----------K---FTNT----- 076

3sy7\_A 000 RQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKA----KAGDISNTTWSLAAAYTLDAHTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQYS 096

2zfg\_A 077 SGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEG------------IGDVDLVNYFEVGATYYF----NKNMSTYVDYIINQIDS 149

3sy7\_A 097 DFNGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDIDGTKMSDNNVGYKNYGYGEDGKHHETNLEAKYVVQSGPAKDLSFRIRQAWHRANA 189

## PDB1: 2zfg\_A

## PDB2: 5dl5\_A

## row number: 40

2zfg\_A 000 GKKAEQWATGLKYDANNIYLAANYGETRNATPITNK-----FT----NTS----GFANKTQDVLLVAQYQFD-----FGLRPSIAYTKSKAKDVEGIGDV 082

5dl5\_A 000 EKTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNVTDD 100

2zfg\_A 083 DLVNYFEVGATYYFN----KNMSTYVDYIINQIDSDNK-LGVGSDDTVAVGIVYQF 133

5dl5\_A 101 AQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 156

## PDB1: 3jty\_A

## PDB2: 3nsg\_A

## row number: 41

3jty\_A 000 QFINLIHSQPLGDWTLGANLGFFYGKEDGSAR---AGDMENRTWSGLFSAKYGGNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQV 097

3nsg\_A 000 VGYTMAYEFD----GFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDANNVYLAAVYAETRNMSIVENT----V----TD---TVEMANKTQNLEV 085

3jty\_A 098 RHDYNFAALGVPGLTLMNRYISGSNVHTAT--VSDGKEWGRESEVAYTVQSGTLKNLNLKWRNSTMRRDF 165

3nsg\_A 086 VAQYQFD----FGLRPAISYVQSKGKQLNGAGGSADLAKYIQAGATYYF----NKNMNVWVDYRFNLLDE 147

## PDB1: 3prn\_A

## PDB2: 5dl5\_A

## row number: 42

3prn\_A 000 VTEEFGIAADWSNDMISLAAAYTTDAGGIVDNDIAFVG-AAYKFNDAGTVGLNWYDNGLSTAGDQVTLYGNYAFG-----A-TTVRAYVSDIDR------ 087

5dl5\_A 000 TNNIWAISGTYATGPHSVMLAYQQNTGN----VGYDYGQNADGFQSIYLPNSYMSDFIG-NHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNV 095

3prn\_A 088 --AGADTAYGIGADYQFA----EGVKVSGSVQSG 115

5dl5\_A 096 TDDAQEREFFNQVKYTVQSGFAKDASLRIRNSYY 129

## PDB1: 3sy7\_A

## PDB2: 5nxr\_A

## row number: 43

3sy7\_A 000 KSADFIGGRYAITDNLSASLYGAELEDI----------------------YRQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKAK---AGDISNTTWSL 075

5nxr\_A 000 GDGYGFSTAYELGWGVTLGGGYSSSSRTPNQKAGVVTSEGDSYYSATGKRAQAWNVGGKFDAN-----NVYLAAMYGQTQNTSRYGDLDLIANKTENVEL 095

3sy7\_A 076 AAAYTLD-AHTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQYSDFNGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDID 164

5nxr\_A 096 VAQYLFDFGLKPSIGYNQSKGKNLG-------------NG-----Y------DNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLKD 157

## PDB1: 3syb\_A

## PDB2: 5nxr\_A

## row number: 44

3syb\_A 000 IDNDTWSLAFTLGHRAHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWDIDGTHYDGDRNGAY 100

5nxr\_A 000 KRAQAWNVGGKFDANNVYLAAMYGQTQNTSRYGD--------------LDLIANKTENVELVAQYLFD----FGLKPSIGYNQSKGKNLGNG-------- 074

3syb\_A 101 GNYAEVRAQDGEKHHELGLMAAYKVQNGPIKDSTFKLTYMMHKASQ 146

5nxr\_A 075 -------YDNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLKD 109

## PDB1: 3sys\_A

## PDB2: 5fvn\_A

## row number: 45

3sys\_A 000 DSHTVYGLFSAGIGLHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKA--GSGGKEW 098

5fvn\_A 000 RAETYTGGLKYDANNIYLAAQYTQTYNATRVG-----------N-----LGWANKAQNFEVVAQYQFD----FGLRPSVAYLQSKGKDLENGYGDQDLLK 080

3sys\_A 099 ERDVELGYTVQSGPLARLNVRLNHASNRRS 128

5fvn\_A 081 YVDVGATYYFN----KNMSTYVDYKINLLD 106

## PDB1: 3sys\_A

## PDB2: 6ehd\_A

## row number: 46

3sys\_A 000 GFNYAGAEYRFNRERTQLGLWHGQLEDV---------------------YRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAARAGEIDSHTVYGLFSAG 079

6ehd\_A 000 ELAELYVGATFG--DLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTI--G--DALIGVTYYNAELDVENNPLVIDEDAISVAGTYK 094

3sys\_A 080 IG-LHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNA 154

6ehd\_A 095 VADKTKLYAGYEYVMQEANT-------------------GADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGT 147

## PDB1: 5dl7\_A

## PDB2: 5mdo\_A

## row number: 47

5dl7\_A 000 NRHISGLFGLNYQNHTVSLGYMQSFGSTGLPFLSGTESPVVLDFMSSDYSNKDEKVYSIRYEYDFKNARIGDVSLNGLRFMTRYAKGEDIDLLQYGDQRF 100

5mdo\_A 000 DYWGGIAAHYKLGPLQLDAAYEGNRNIEA-------E-----G------QTWENNTYLVGVQGWFE---------NGISFFAQYKYMEADASNG---VNE 070

5dl7\_A 101 KEDSLEFDLGYKIPEGKLKGLGMRARFSHYRNDMPT--NMTFHSANETRLNVDYTF 154

5mdo\_A 071 KQDAMSAGLMYTTG----D-WQYKLGYAANFDLERDGKTLSNTSDDVVSAQIMYFV 121

## PDB1: 5dl7\_A

## PDB2: 5mdo\_A

## row number: 48

5dl7\_A 000 FLGFNGKQPLNDQLNFLSDVRFFNSEETGSKKIGEVDNRHISGLFGLNYQ-NHTVSLGYMQSFGSTGLPFLSGTESPVVLDFMSSDYSNKDEKVYSIRYE 099

5mdo\_A 000 GIAAHYKLG-----PLQLDAAYEGNRNIEAE-GQTWENNTYLVGVQGWFENGISFFAQYKYMEADASN------------G------VNEKQDAMSAGLM 076

5dl7\_A 100 YDFKNARIGDVSLNGLRFMTRYAKGEDIDLLQYGDQRFKEDSLEFDLGYKIPEGKLKGLGMRARFSHYRNDMPT----------NMTFHSANETRLNVDY 189

5mdo\_A 077 YTTG---------D-WQYKLGYAANFDLERDGKTLSNTSDDVVSAQIMYFVD----PSAVLYARARMNDFNEGLDGLDDAARWTSGTNGDYNEYSVGVEY 162

5dl7\_A 190 TF 191

5mdo\_A 163 YF 164

## PDB1: 3nsg\_A

## PDB2: 3sy9\_A

## row number: 49

3nsg\_A 000 DGVGYTMAYEFD-----GFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDANNVYLAAVYAETRNMSIVENT----V--TD-----TVEMANKTQN 084

3sy9\_A 000 KQYYADVDYTYEIDDNWSLNPGAHYYKTVDSGDSL---LGRIDNNTYSLHFAVGYRQHTVTAVLQKVNGNTPFDYINQGDSIFLDNSQQYSDFNGPNEKS 097

3nsg\_A 085 LEVVAQYQFD----FGLRPAISYVQSKGKQL----NG--------AGGSADLAKYIQAGATYYFN----KNMNVWVDYRFNLLDE 149

3sy9\_A 098 WKLQYDYDFVALGVPGLSASASYSRGKLDLTRVDPDSPGYGGWYSADGKNAKHWERDLDLQYVVQGGPAKDLSLRLRWATHRGTG 182

## PDB1: 3nsg\_A

## PDB2: 3sys\_A

## row number: 50

3nsg\_A 000 GDGVGYTMAYEFD--GFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDA--NN--VYLAAVYAETRNMSIVENTVTDTVEMANKTQNLEVVAQYQF 094

3sys\_A 000 DGFNYAGAEYRFNRERTQLGLWHGQLEDV------------YRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAAR-------AGEIDSHTVYGLFSAGI 081

3nsg\_A 095 DFGLRPAISYVQSKGKQLN-------G----A-----GGSADLAKYIQAGATYYFN----KNMNVWVDYRFNLLDE 150

3sys\_A 082 GL-HTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNAT 156

## PDB1: 3nsg\_A

## PDB2: 4ft6\_A

## row number: 51

3nsg\_A 000 NKLDLYGKAVGRHVWTTTGDS----KNADQTYAQIGFKGETQINTD-LTGFGQWEYRT--KADRA--E------------GEQQNSNLVRLAFAGLKYAE 079

4ft6\_A 000 EDASVSLGLRNLYFNRDFRQPGAAQSKQEEWAQGFLLQAKSGYTQGTLGLGVELIGQLGLKLDSSPDRAGSGLLPRHADGRAADDYARLGVA-PKLKL-S 098

3nsg\_A 080 VGSIDYGRNYGI 91

4ft6\_A 099 NTELKLGELLPE 110

## PDB1: 3syb\_A

## PDB2: 6ehd\_A

## row number: 52

3syb\_A 000 IDNDTWSLAFTLGHRAHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWDIDGTHYDGDRNGAY 100

6ehd\_A 000 VTNSYFEVTGEYTIGDALIGVTYYNAELDVEN-------N----------PLVIDEDAISVAGTYKVA----DKTKLYAGYEYVMQEANTG--------- 070

3syb\_A 101 GNYAEVRAQDGEKHHELGLMAAYKVQNGPIKDSTFKLTYMMHKASQ 146

6ehd\_A 071 ---------ADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGTT 103

## PDB1: 3szv\_A

## PDB2: 6ehd\_A

## row number: 53

3szv\_A 000 SLKSDLRFARASEDGG--FRELDNRAFGALFSLRLG-AHAVAAGYQRISGDDPYPYIAGSDPYLVNFIQIGDFGNVDERSWQLRYDYDFGALGLPGLSFM 097

6ehd\_A 000 DALIGVTYYNAELDVENNPLVIDEDAISVAGTYKVADKTKLYAGYEYVMQEAN-------T-----------GADEDGTLVYLGVEYKFAS----WARVY 078

3szv\_A 098 SRYVSGDNV 106

6ehd\_A 079 AEYGYGDGT 87

## PDB1: 3wi5\_A

## PDB2: 4frt\_A

## row number: 54

3wi5\_A 000 NSESYHAGFNYKNGGFFVQYGGAYKRHHQVQE-----G------L-------NIEKYQIHRLVSGYDND-----ALYASVAVQQQDAKLTDASNSHNSQT 077

4frt\_A 000 NNRALNALFTYRLGGHAFG--LGYQRMSGDSGFAYLAGTDPYLVNFVQIGDFANKDERSWQLRYDYDFAAIGLPGLTFMSRYLRGEHIDLLDGGGRGKEW 098

3wi5\_A 078 EVAATLAYRFG----N-VTPRVSYAHGFKGLVAKADIGNRYDQVVVGAEYDFS 125

4frt\_A 099 ERDTDIAYLVQSGPLKNLGIKLRNGTFRSD------FGNDIDETRLIVSYALP 145

## PDB1: 5dl5\_A

## PDB2: 5nxr\_A

## row number: 55

5dl5\_A 000 EKTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRN-VTD 099

5nxr\_A 000 GKRAQAWNVGGKFDANNVYLAAMYGQTQNTSRYG---------D----L----DLIANKTENVELVAQYLFD-----FGLKPSIGYNQSKGKNLGNGYDN 078

5dl5\_A 100 DAQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQG--AYIGDTNEWRIFLDIPV 156

5nxr\_A 079 QDLVKYISVGSYYYFN----KNMSAVVDYKINLLKDNDFTKEYGINTDNVLGLGLVYQF 133

## PDB1: 1pho\_A

## PDB2: 5ldv\_A

## row number: 56

1pho\_A 000 KRAEAWATGLKYDA-NNIYLATFYSETRKMTPIT-GGFANKTQNFEAVAQYQFDFGLRPSLGYVLSKGKDIEGIGDEDLVNYIDVGATYY 88

5ldv\_A 000 GRNIFGYVTGGYTFNETVRVGADFVYGGTKTEATTHLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNLDQGVNTNESADHSTVRLQALYK 90

## PDB1: 3jty\_A

## PDB2: 5fvn\_A

## row number: 57

3jty\_A 000 DRFNFQGAEYAFNDKRTQIALWNAQLKDI-------------YSQQFINLIHSQPLGDWTLGANLGFFYGKEDGSA--RAGDMENRTWSGLFSAKYG-GN 084

5fvn\_A 000 GDGVGGSITYNLGE-GFGIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDA--N--NIYLAAQYTQTYNATRVGNLGWANKAQNFEVVAQYQFDFGL 095

3jty\_A 085 TFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNV 155

5fvn\_A 096 RPSVAYLQSKGKDLE------NG----Y------GDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLD 146

## PDB1: 3jty\_A

## PDB2: 5nxr\_A

## row number: 58

3jty\_A 000 DRFNFQGAEYAFNDKRTQIALWNAQLKDI----------------------YSQQFINLIHSQPLGDWTLGANLGFFYGKEDGSAR---AGDMENRTWSG 075

5nxr\_A 000 GDGYGFSTAYELGW-GVTLGGGYSSSSRTPNQKAGVVTSEGDSYYSATGKRAQAWNVGGKFDAN----NVYLAAMYGQTQNTSRYGDLDLIANKTENVEL 095

3jty\_A 076 LFSAKYG-GNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNV 155

5nxr\_A 096 VAQYLFDFGLKPSIGYNQSKGKNLG------NG----Y------DNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLK 156

## PDB1: 3nsg\_A

## PDB2: 5dl8\_B

## row number: 59

3nsg\_A 000 NGDGVGYTMAYEFDGFGVTAAYSNSKRTNDQQ------D--R-D------GNGDRAESRAVGAKYDAN----NVYLAAVYAETRNMSIVENTVTDTVEMA 081

5dl8\_B 000 DAENIGLLETVKVKNHTFGLGYQQIIGESAYPLPDGFLPETYFINWNATGFFKEDEKSYHVMYGYDFKDYIPGLNAMVKYVYGHDFKAAN-------GEK 093

3nsg\_A 082 NKTQNLEVVAQYQFD----FGLRPAISYVQSKGKQLNGAGGSADLAKYIQAGATYYF 134

5dl8\_B 094 NHETESNVILNYAFQQPLLKGFALQYIRIDYNVKH-------GNDFGEDRLFVNYTK 143

## PDB1: 3prn\_A

## PDB2: 3szd\_A

## row number: 60

3prn\_A 000 VTEEFGIAADWSNDMISLAAAYTTDAGGIVDNDIAFVGAAYKFNDAGTVGLNWYDNGLSTAGDQVTLYGNYAFG----A-TTVRAYVSDIDR-A------ 088

3szd\_A 000 DNRTVSALFSARYGLHTLYLGLQKVSGDD--GWMRVNGTS-G-GTLAN-DSYNASYDN-PGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHVRLAGVTD 094

3prn\_A 089 -GADTAYGIGADYQF--A--EGVKVSGSVQSG 115

3szd\_A 095 DGSEWGRESELGYTLQSGAFKRLNVRWRNSSQ 126

## PDB1: 3t0s\_A

## PDB2: 4d65\_A

## row number: 61

3t0s\_A 000 RQHYLGLLHTLPLGEGLSLRSDLRYFDSGEDGAAI-----SGPVDNRNLNAMLTLRAGAHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQE 095

4d65\_A 000 DGYGFSTAYELG----WGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLELDELYLAAMYGQTLNTTRFGD----DD----A-----EAIANKT 083

3t0s\_A 096 KSWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGAGRADDSEWERNTDLSYVIQSGPLKSVALKWRNITYRSR 168

4d65\_A 084 ENLELVALYSFD----FGLTPSIGYNQSKGKNLGNYGNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLK 148

## PDB1: 4fsp\_A

## PDB2: 5mdo\_A

## row number: 62

4fsp\_A 000 DNRSFSGSLTYRLRN-GQAFGLGYQRMSGDHGFPYLEGTDPYLVNFGQYNDFAEAGESSWQLRYDCDFAPLGVPGLSLMTRYFSGHGAKPK--GADGSRE 097

5mdo\_A 000 ENNTYLVGVQGWF-ENGISFFAQYKYMEADAS------------N------GVNEKQDAMSAGLMYTTG-----DWQYKLGYAANFDLERDGKTLSNTSD 076

4fsp\_A 098 WERDSDLRYVLQGGALKGLGLVWRNATYRSA 128

5mdo\_A 077 DVVSAQIMYFVD----PSAVLYARARMNDFN 103

## PDB1: 5dl6\_A

## PDB2: 5nxr\_A

## row number: 63

5dl6\_A 000 TDGLYYLGGNYQFNPALKLTAFYMDVDDL----------------------YNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAK---AGLVDNDLYH 075

5nxr\_A 000 NGDGYGFSTAYELGWGVTLGGGYSSSSRTPNQKAGVVTSEGDSYYSATGKRAQAWNVGGKFDA--N---NVYLAAMYGQTQNTSRYGDLDLIANKTENVE 095

5dl6\_A 076 AHFELKHQ-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHN 153

5nxr\_A 096 LVAQYLFDFGLKPSIGYNQSKGKNLGN-----G----------YDNQDLVKYISVGSYYYFN---KNMSAVVDYKINLL 156

## PDB1: 2por\_A

## PDB2: 3t0s\_A

## row number: 64

2por\_A 000 DAQEMAVAAAYTFGNYTVGLGYEKIDSPDT-------A-------------LMADMEQLELAAIAKFG-----ATNVKAYYADGELDRDFARAVFDLTPV 075

3t0s\_A 000 DNRNLNAMLTLRAGAHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGA--------- 091

2por\_A 076 AAAATAVDHKAYGLSVDSTF--GA---TTVGGYVQVLDIDTIDDVTYYGLGASYDLG 127

3t0s\_A 092 --GRADDSEWERNTDLSYVIQSGPLKSVALKWRNITYRSRYGADLDENRFIVNYTLK 146

## PDB1: 3nsg\_A

## PDB2: 3t24\_A

## row number: 65

3nsg\_A 000 KTQNLEVVAQYQFDFGLRPAISYVQSKGKQLN-------G--------AGGSADLAKYIQAGATYYFN----KNMNVWVDYRFNLLD 68

3t24\_A 000 DNKALNAMFTYSLG-YHAFGVGYQKMSGDTGFAYINGADPYLVNFIQIGDFANKDEKSWQARYDYNFAGVGIPGLTFMTRYVKGDNI 86

## PDB1: 3syb\_A

## PDB2: 5fvn\_A

## row number: 66

3syb\_A 000 IDNDTWSLAFTLGHRAHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWDIDGTHYDGDRNGAY 100

5fvn\_A 000 DRAETYTGGLKYDANNIYLAAQYTQTYNATRVG----------N-----LGWANKAQNFEVVAQYQFD----FGLRPSVAYLQSKGKDLENG-------- 073

3syb\_A 101 GNYAEVRAQDGEKHHELGLMAAYKVQNGPIKDSTFKLTYMMHKASQ 146

5fvn\_A 074 -------YGDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLDD 108

## PDB1: 4fsp\_A

## PDB2: 5fvn\_A

## row number: 67

4fsp\_A 000 DNRSFSGSLTYRLRN-GQAFGLGYQRMSGDHGFPYLEGTDPYLVNFGQYNDFAEAGESSWQLRYDCDFAPLGVPGLSLMTRYFSGHGAKPKG--ADGSRE 097

5fvn\_A 000 NGDGVGGSITYNL-GEGFGIGTAVSSSKRTSSQN-----DL--T------YGNGDRAETYTGGLKYDAN-----NIYLAAQYTQTYNATRVGNLGWANKA 081

4fsp\_A 098 WERDSDLRYVLQGGALKGLGLVWRNATYRSAF-------SRDIDENRLYLTYEL 144

5fvn\_A 082 QNFEVVAQYQFD----FGLRPSVAYLQSKGKDLENGYGDQDLLKYVDVGATYYF 131

## PDB1: 2zfg\_A

## PDB2: 4frx\_A

## row number: 68

2zfg\_A 000 NGDGVGGSISYEYEGFGIVGAYGAADRTNLQ---E------AQ-P--L------GNGKKAEQWATGLKYDAN-----NIYLAANYGETRNATPITNKFTN 077

4frx\_A 000 DNRAFSGLFTYTVSGHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIKTA------ 094

2zfg\_A 078 TSGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEGI--GDVDLVNYFEVGATYYF 134

4frx\_A 095 --RGDQSEWERDISLAYVIPDGTFKGLGFTWKNASFRSGLPAAGSSNNQRDQDENRLIVSYTL 155

## PDB1: 3sys\_A

## PDB2: 5nxr\_A

## row number: 69

3sys\_A 000 DSHTVYGLFSAGIGLHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKA--GSGGKEW 098

5nxr\_A 000 RAQAWNVGGKFDANNVYLAAMYGQTQNTSRYG----D-----------LDLIANKTENVELVAQYLFD----FGLKPSIGYNQSKGKNLGNGYDNQDLVK 081

3sys\_A 099 ERDVELGYTVQSGPLARLNVRLNHASNRRS 128

5nxr\_A 082 YISVGSYYYFN----KNMSAVVDYKINLLK 107

## PDB1: 3szv\_A

## PDB2: 3wi5\_A

## row number: 70

3szv\_A 000 RQTFAGLVHTLDLGGQRSLKSDLRFARASEDGGF-RELDNRAFGALFSLRLGAHAVAAGYQRISGDDPYPYIAGSDPYLVNFIQIGDFGNVDERSWQLRY 099

3wi5\_A 000 ESYHAGFNYKNG---GFFVQYGGAYKRHHQVQEGLNIEKYQIHRLVSGYDNDALYASVAVQQQDAKLTD----A------SN------SHNSQTEVAATL 081

3szv\_A 100 DYDFGALGLPGLSFMSRYVSGDNVARG-AANDGKEWERNTDLGYVVQSGPLKNLGVKWRNATVRSNFA---NDLDENRLILSYSL 180

3wi5\_A 082 AYRFG-----NVTPRVSYAHGFKGLVAKADIGNRYDQVVVGAEYDFS----KRTSALVSAGWLQEGKGENKFVATAGGVGLRHKF 157

## PDB1: 3wi5\_A

## PDB2: 4frx\_A

## row number: 71

3wi5\_A 000 EKYQIHRLVSGYDNDALYASVAVQQQDAKLTD----------AS----N-------SHNSQTEVAATLAYRFG-----NVTPRVSYAHGFKGLVAKADIG 074

4frx\_A 000 VDNRAFSGLFTYTVSGHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIKTA--RGD 098

3wi5\_A 075 NRYDQVVVGAEYDFS----KRTSALVSAGWLQEGKGE-----NKFVATAGGVGLRHKF 123

4frx\_A 099 QSEWERDISLAYVIPDGTFKGLGFTWKNASFRSGLPAAGSSNNQRDQDENRLIVSYTL 156

## PDB1: 5fvn\_A

## PDB2: 5ldv\_A

## row number: 72

5fvn\_A 000 DRAETYTGGLKYDA-NNIYLAAQYTQTYNATRVGNLGWANKAQNFEVVAQYQFDFGLRPSVAYLQSKGKDLENGYGDQDLLKYVDVGATYYF 91

5ldv\_A 000 GRNIFGYVTGGYTFNETVRVGADFVYGGTKTEATTHLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNLDQGVN-TNESADHSTVRLQALYKF 91

## PDB1: 1pho\_A

## PDB2: 3sy9\_A

## row number: 73

1pho\_A 000 NGDGFGTSLTYDFGGSDFAISGAYTNSDRTNEQNLQSRGTGKRAEAWATGLKYDAN-----NIYLATFYSETRKMTPITGGFANKTQNFEAVAQYQFDFG 095

3sy9\_A 000 SHHLSWLGGTWGGIE-GFTSSLYAAELQNV-------------WKQYYADVDYTYEIDDNWSLNPGAHYYKTVDSGDS-LLGRIDNNTYSLHFAVGYR-Q 084

1pho\_A 096 LRPSLGYVLSKGKDIE-------G----I------GDEDLVNYIDVGATYYFN----KNMSAFVDYKINQL 145

3sy9\_A 085 HTVTAVLQKVNGNTPFDYINQGDSIFLDNSQQYSDFNGPNEKSWKLQYDYDFVALGVPGLSASASYSRGKL 155

## PDB1: 2por\_A

## PDB2: 5dl5\_A

## row number: 74

2por\_A 000 ADMEQLELAAIAKFGATNVKAYYADGELDRDFARA----VF-D---LTPVAAAATAVDHKAYGLSVDSTFG-----A-TTVGGYVQVLDI-D-----TID 080

5dl5\_A 000 KTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNVTDDA 100

2por\_A 081 DVTYYGLGASYDLG----GGASIVGGIADNDLP--------NSDMVADLGVKFKF 123

5dl5\_A 101 QEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 155

## PDB1: 3prn\_A

## PDB2: 5dl5\_A

## row number: 75

3prn\_A 000 DNDIAFVGAAYKFNDAGTVGLNWYDNGLSTAGDQVTLYGNYAFGATTVR-AYVSDIDR-AGADTAYGIGADYQFA-----EGVKVSGSVQSG 85

5dl5\_A 000 TNNIWAISGTYATGPH-SVMLAYQQNTGNV---GYDYGQN-ADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYG 87

## PDB1: 3sy7\_A

## PDB2: 6ehb\_A

## row number: 76

3sy7\_A 000 SNTTWSLAAAYTLD--AHTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQYSDF-NGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDIDG 097

6ehb\_A 000 GEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEYM-LA-AS--YRMEN--LYFAGLFTDGELAKDVDYTGYELAAGYKLGQ-----AAFTATYNNAETAK- 088

3sy7\_A 098 TKMSDNNVGYKNYGYGEDGKHHETNLEAKYVVQSGPAKDLSFRIRQAWHRANA 150

6ehb\_A 089 -----------------KTSADNFAIDATYYF----KPNFRSYISYQFNLLDS 120

## PDB1: 4fsp\_A

## PDB2: 5mdo\_A

## row number: 77

4fsp\_A 000 RFDLAGLDYRIAPDWTGSYHYGELEQV--------YAQHFLGLKGRIGIAADSLESDLRLALSRDTGGARGGRIDNRSFSGSLTYRLRNGQAFGLGYQRM 092

5mdo\_A 000 YWGGIAAHYKL-GPLQLDAAYEGNRNIEAEGQTWENNTYLVGVQGWFE---NGISFFAQYKYMEADASN-GVNEKQDAMSAGLMYTT-GDWQYKLGYAAN 094

4fsp\_A 093 SGDHGFPYLEGTDPYLVNFGQYNDFAEAGESSWQLRYDCDFAPLGVPGLSLMTRYFSGHGA 153

5mdo\_A 095 FDLERD----G------K-----TLSNTSDDVVSAQIMYFVD----PSAVLYARARMNDFN 136

## PDB1: 5dl6\_A

## PDB2: 5fvn\_A

## row number: 78

5dl6\_A 000 TDGLYYLGGNYQFNPALKLTAFYMDVDDL-------------YNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQA--KAGLVDNDLYHAHFELKHQ-N 084

5fvn\_A 000 NGDGVGGSITYNLGEGFGIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDA--N-NIY--LAAQYTQTYNATRVGNLGWANKAQNFEVVAQYQFDFG 095

5dl6\_A 085 HKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHN 153

5fvn\_A 096 LRPSVAYLQSKGKDLE----NG-----------YGDQDLLKYVDVGATYYFN---KNMSTYVDYKINLL 146

## PDB1: 5dl6\_A

## PDB2: 6ehd\_A

## row number: 79

5dl6\_A 000 GLYYLGGNYQFNPALKLTAFYMDVDD---------------------LYNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAKAGLVDNDLYHAHFELK 079

6ehd\_A 000 ELAELYVGATF-GDLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTI--G---DALIGVTYYNAELDVENNPLVIDEDAISVAGTYK 094

5dl6\_A 080 HQ-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHN 151

6ehd\_A 095 VADKTKLYAGYEYVMQEANT-----------G-------ADEDGTLVYLGVEYKFA---SWARVYAEYGYGDG 146

## PDB1: 2fgr\_A

## PDB2: 3sy7\_A

## row number: 80

2fgr\_A 000 IKTNSYMLGASAPVG----GVGEVKLQYALYDQKA-----------------IDSKAHQITLGYVHNL----SKRTALYGNLAFLKNKD 64

3sy7\_A 000 PGEKSWQARYDLNLASYGVPGLTFMVRYINGKDIDGTKMSDNNVGYKNYGYGEDGKHHETNLEAKYVVQSGPAKDLSFRIRQAWHRANA 89

## PDB1: 2por\_A

## PDB2: 4frx\_A

## row number: 81

2por\_A 000 DAQEMAVAAAYTFGNYTVGLGYEKIDSPDT-----------A-------------LMADMEQLELAAIAKFG-----ATNVKAYYADGELDRDFARAVFD 071

4frx\_A 000 DNRAFSGLFTYTVSGHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIKTA------ 094

2por\_A 072 LTPVAAAATAVDHKAYGLSVDSTFG--A---TTVGGYVQVLDID--------TIDDVTYYGLGASYDL 126

4frx\_A 095 -------RGDQSEWERDISLAYVIPDGTFKGLGFTWKNASFRSGLPAAGSSNNQRDQDENRLIVSYTL 155

## PDB1: 2zfg\_A

## PDB2: 3szd\_A

## row number: 82

2zfg\_A 000 KKAEQWATGLKYDANNIYLAANYGETRNATPITNK------F--T---NTSGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEGIGDVDLVN 085

3szd\_A 000 LDNRTVSALFSARYGLHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHVRLAGVTDDGSEW 100

2zfg\_A 086 YFEVGATYYFN----KNMSTYVDYIINQIDS 112

3szd\_A 101 GRESELGYTLQSGAFKRLNVRWRNSSQRRDW 131

## PDB1: 2zfg\_A

## PDB2: 5ldv\_A

## row number: 83

2zfg\_A 000 KKAEQWATGLKYDA-NNIYLAANYGETRNATPITNKFTNTSGFANKTQDVLLVAQYQFDFGLRPSIAYTKSKAKDVEGIGDVDLVNYFEVGATYYF 95

5ldv\_A 000 GRNIFGYVTGGYTFNETVRVGADFVYGGTKTEATT-----HLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNLDQGVNTNESADHSTVRLQALYKF 91

## PDB1: 3nsg\_A

## PDB2: 5dl5\_A

## row number: 84

3nsg\_A 000 GDRAESRAVGAKYDANNVYLAAVYAETRNMSIVENT------VT---DT----VEMANKTQNLEVVAQYQFD-----FGLRPAISYVQSKGKQLNGAGGS 082

5dl5\_A 000 EKTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRN-VTD 099

3nsg\_A 083 ADLAKYIQAGATYYFN----KNMNVWVDYRFNLLDENDYSSSYVGTDDQAAVGITYQF 136

5dl5\_A 100 DAQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQG-AYIGDTNEWRIFLDIPV 156

## PDB1: 5dl5\_A

## PDB2: 6ehd\_A

## row number: 85

5dl5\_A 000 EKTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNVTDD 100

6ehd\_A 000 DVTNSYFEVTGEYTIGDALIGVTYYNAELDVEN---------N-----P------LVIDEDAISVAGTYKVA-----DKTKLYAGYEYVMQEANT--GAD 073

5dl5\_A 101 AQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASD 135

6ehd\_A 074 EDGTLVYLGVEYKFA----SWARVYAEYGYGDGTT 104

## PDB1: 5ldv\_A

## PDB2: 6ehd\_A

## row number: 86

5ldv\_A 000 GRNIFGYVTGGYTFNETVRVGADFVYGGTKTEATTHLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNLDQGVNTNESADHSTVRLQALYK 90

6ehd\_A 000 VTNSYFEVTGEYTI-GDALIGVTYYNAELDVENN--PLVIDEDAISVAGTYKVADKTKLYAGYEYVMQEANT--GADEDGTLVYLGVEYK 85

## PDB1: 3a2s\_X

## PDB2: 3szv\_A

## row number: 87

3a2s\_X 000 HRVVAGYDAN---DLYVSVAGQYEAAKNNEVGSIKGKKHEQTQVAATAAYRFGNVTPRVSYAHGFKAKV-N---G-----VK------DANYQYDQVIVG 082

3szv\_A 000 TFAGLVHTLDLGGQRSLKSDLRFARASEDGG----FRELDNRAFGALFSLRLGAHAVAAGYQRISGDDPYPYIAGSDPYLVNFIQIGDFGNVDERSWQLR 096

3a2s\_X 083 ADYDFS----KRTSALVSAGWLKQG 103

3szv\_A 097 YDYDFGALGLPGLSFMSRYVSGDNV 121

## PDB1: 3nsg\_A

## PDB2: 4frx\_A

## row number: 88

3nsg\_A 000 NGDGVGYTMAYEFDGFGVTAAYSNSKRTNDQQ---------D-----R-----DGNGDRAESRAVGAKYDAN-----NVYLAAVYAETRNMSIVENTVTD 076

4frx\_A 000 DNRAFSGLFTYTVSGHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKIKTA------ 094

3nsg\_A 077 TVEMANKTQNLEVVAQYQFD----FGLRPAISYVQSKGKQLNGA-GGSADLAKYIQAGATYYF 134

4frx\_A 095 --RGDQSEWERDISLAYVIPDGTFKGLGFTWKNASFRSGLPAAGSSNNQRDQDENRLIVSYTL 155

## PDB1: 3sy9\_A

## PDB2: 6ehb\_A

## row number: 89

3sy9\_A 000 DNNTYSLHFAVGYR--QHTVTAVLQKVNGNTPFDYINQ--GDSIFLDNSQQYSDF-NGPNEKSWKLQYDYDFVALGVPGLSASASYSRGKLDLTRVDPDS 095

6ehb\_A 000 GEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEYMLAASYRMENLYFAGLFTDGELAKDVDYTGYELAAGYKLGQ-----AAFTATYNNAETA-------- 087

3sy9\_A 096 PGYGGWYSADGKNAKHWERDLDLQYVVQGGPAKDLSLRLRWATHRGTG 143

6ehb\_A 088 -----------KKTSADNFAIDATYYFK----PNFRSYISYQFNLLDS 120

## PDB1: 3t0s\_A

## PDB2: 5nxr\_A

## row number: 90

3t0s\_A 000 VDNRNLNAMLTLRAGAHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGA-GRADDSE 099

5nxr\_A 000 KRAQAWNVGGKFDANNVYLAAMYGQTQNTSRYG------D----L-----DLIANKTENVELVAQYLFD----FGLKPSIGYNQSKGKNLGNGYDNQDLV 081

3t0s\_A 100 WERNTDLSYVIQSGPLKSVALKWRNITYRSR 130

5nxr\_A 082 KYISVGSYYYFN----KNMSAVVDYKINLLK 108

## PDB1: 4d65\_A

## PDB2: 5ldv\_A

## row number: 91

4d65\_A 000 KRAEAWNVGSKLEL-DELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYSFDFGLTPSIGYNQSKGKNLGNYGNKDLVKYIAVGASYD 92

5ldv\_A 000 GRNIFGYVTGGYTFNETVRVGADFVYGGTKTEATT---HLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNLDQGVNTNESADHSTVRLQALYK 90

## PDB1: 5dl8\_B

## PDB2: 6ehd\_A

## row number: 92

5dl8\_B 000 GLNYIDLRYQFTPSLKGEYYFGNLEDL---------------------YNKHYVGLEHTWKQPTFALTSKFKYFNAKDDGNT--FDIDAENIGLLETVKV 077

6ehd\_A 000 ELAELYVGATF-GDLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYT--IG--DALIGVTYYNAELDVENNPLVIDEDAISVAGTYKV 095

5dl8\_B 078 K-NHTFGLGYQQIIGESAYPLPDGFLPETYFINWNATGFFKEDEKSYHVMYGYDFKDYIPGLNAMVKYVYGHDF 150

6ehd\_A 096 ADKTKLYAGYEYVMQEANT------------G-------ADEDGTLVYLGVEYKFA---SWARVYAEYGYGDGT 147

## PDB1: 1pho\_A

## PDB2: 3sys\_A

## row number: 93

1pho\_A 000 TQNFEAVAQYQFDFGLRPSLGYVLSKGKDIE---------G--I------GDEDLVNYIDVGATYYFN----KNMSAFVDYKINQLDSDNKLNINNDDIV 079

3sys\_A 000 SHTVYGLFSAGIG-LHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKAGSGGKEWER 099

1pho\_A 080 AVGMTYQ 86

3sys\_A 100 DVELGYT 106

## PDB1: 2por\_A

## PDB2: 3szd\_A

## row number: 94

2por\_A 000 ADMEQLELAAIAKFGATNVKAYYADGELD 29

3szd\_A 000 LDNRTVSALFSARYGLHTLYLGLQKVSGD 29

## PDB1: 2y0l\_A

## PDB2: 3wi5\_A

## row number: 95

2y0l\_A 000 DNKSLNGMFTYSLGNHAFG--AAWQRMNGDDAFPYLEGSNPYLVNFVQVNDFAGPKERSWQLRYDYDFVGLGIPGLTFMTRYVKGDNVELAGQSGEGREW 098

3wi5\_A 000 NSESYHAGFNYKNGGFFVQYGGAYKRHHQVQE-----G------L-------NIEKYQIHRLVSGYDND-----ALYASVAVQQQDAKLTDASNSHNSQT 077

2y0l\_A 099 ERNTELQYVFQSGALKNLGIRWRNATFRSN------FTRDIDENRLIVSYTLP 145

3wi5\_A 078 EVAATLAYRFG----N-VTPRVSYAHGFKGLVAKADIGNRYDQVVVGAEYDFS 125

## PDB1: 2y0l\_A

## PDB2: 4rjw\_A

## row number: 96

2y0l\_A 000 EDSKASLETRNFYMNRDFRDGP-GQSKREEWAQGFILNLQSGYTQG-TVGFGLDAMGMLGVKLDSGRGRSGTGLLPKDSDGRAPDTYSKLGL-TAKVKVS 097

4rjw\_A 000 FSFKLGGRLQADYSRFDGFYTKNGNTADAAYFRRAFIELGGTAYKDWKYQINFDLSHNT-----------------------GSSDNGYFDEASVTYTGF 077

2y0l\_A 098 -QSELKVGTLIP 108

4rjw\_A 078 NPVNLKFGRFDP 89

## PDB1: 3jty\_A

## PDB2: 3nsg\_A

## row number: 97

3jty\_A 000 EDAQANLTLRNFYFNRNFTNPTKAQGKAEEWTQSFILDAKSGFTQGTVGFGMDVLGLYSLKLDGGKGTGGTQLLPLDHDGRPADNFGRLGVAF-KARLSQ 099

3nsg\_A 000 NKLDLYGKAVGRHVWTTTGDS----KNADQTYAQIGFKGETQINTD-LTGFGQWEYRT--KA--DRA---E---------GEQQNSNLVRLAFAGLKYAE 079

3jty\_A 100 -TEVKVGEWMPVLPILR-SDDGRSLPQTFRGG-----------------QITSKE--I----AGLTLYGGQFRANSPRDDSSMSDMSMFGKAAFTSDRFN 174

3nsg\_A 080 VGSIDYGRNYGIVYDVESYTDM--APY-FSGETWGGAYTDNYMTSRAGGLLTYRNSDFFGLVDGLSFGIQYQGKNQDNHS-----------INSQNGDGV 165

3jty\_A 175 FQGAEYAFNDKRTQIALWNAQLKD------------IYSQQFINLIHSQPLGDWTLGANLGFFYGKEDGSA-------RAGDMENRTWSGLFSAKYG-GN 254

3nsg\_A 166 GYTMAYEF-D-GFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDA--N--NVYLAAVYAETRNMSIVENTVTDTVEMANKTQNLEVVAQYQFDFGL 259

3jty\_A 255 TFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNV 325

3nsg\_A 260 RPAISYVQSKGKQLN---------G-------AGGSADLAKYIQAGATYYFN----KNMNVWVDYRFNLLD 310

## PDB1: 3nsg\_A

## PDB2: 3sy7\_A

## row number: 98

3nsg\_A 000 GDGVGYTMAYEF-DGFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDAN-----NVYLAAVYAETRNMSIVENTVTDTVEMANKTQNLEVVAQYQF 094

3sy7\_A 000 KSADFIGGRYAITDNLSASLYGAELEDI------------YRQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKAK-------AGDISNTTWSLAAAYTL 081

3nsg\_A 095 DFGLRPAISYVQSKGKQLN-------------GA-----G------GSADLAKYIQAGATYYFN----KNMNVWVDYRFNLLDE 150

3sy7\_A 082 DA-HTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQYSDFNGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDID 164

## PDB1: 3nsg\_A

## PDB2: 3sy9\_A

## row number: 99

3nsg\_A 000 NGDGVGYTMAYEF-DGFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDA--N---NVYLAAVYAETRNMSIVENTVTDTVEMANKTQNLEVVAQYQ 094

3sy9\_A 000 SHHLSWLGGTWGGIEGFTSSLYAAELQNV------------WKQYYADVDYTYEIDDNWSLNPGAHYYKTVDSGDSL-------LGRIDNNTYSLHFAVG 081

3nsg\_A 095 FDFGLRPAISYVQSKGKQLN-----G-A---G-------GSADLAKYIQAGATYYFNK----NMNVWVDYRFNLL 149

3sy9\_A 082 YRQ-HTVTAVLQKVNGNTPFDYINQGDSIFLDNSQQYSDFNGPNEKSWKLQYDYDFVALGVPGLSASASYSRGKL 155

## PDB1: 3sys\_A

## PDB2: 4d65\_A

## row number: 100

3sys\_A 000 EDAKTDLVLRNYYFNRDFRDHDAGKSLVDEWAQGFILKFSSGYTPG-TVGVGLDAIGLFGVKLNSGRGTSNSELLPLHDDGRAADNYGRVGVA-AKLRV- 097

4d65\_A 000 NKLDVYGQIDVRHYFADAKSG----EDGDDSRVRLGFKGDTQITDQLIGFGRFEWET----STNK---------------AETSNDNQ-NRLAYAGLKFA 076

3sys\_A 098 SASELKIGEMLPDIPLLRY-DD----GRLL---------PQTFRGFAVVSR-E-----LPGLALQAGRFDAVSLRNSADMQDLSAWSAPTQKSDGFNYAG 177

4d65\_A 077 DYGSLDYGRNYGVIYDTNAWTDVLPLWGADTMDQEDTFMMGRNR-NLLTYRNNNGFGYIDGLSFALQYQGKNGDQNKST----GSS--ALDNNGDGYGFS 169

3sys\_A 178 AEYRFNRERTQLGLWHGQLED--------------VYRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAAR-----AGEIDSHTVYGLFSAGIG-LHTFY 257

4d65\_A 170 TAYELG-WGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLEL--D--ELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYSFDFGLTPS 264

3sys\_A 258 LGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNAT 326

4d65\_A 265 IGYNQSKGKNLG---------N--------YGNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLKD 312

## PDB1: 3t24\_A

## PDB2: 3wi5\_A

## row number: 101

3t24\_A 000 DNKALNAMFTYSLGYHAFG--VGYQKMSGDTGFAYINGADPYLVNFIQIGDFANKDEKSWQARYDYNFAGVGIPGLTFMTRYVKGDNIDLLTTSGEGKEW 098

3wi5\_A 000 NSESYHAGFNYKNGGFFVQYGGAYKRHHQVQE-----G------L-------NIEKYQIHRLVSGYDND-----ALYASVAVQQQDAKLTDASNSHNSQT 077

3t24\_A 099 ERDMDIAYVFQSGPLKNLGVKWRNATMRTN------YTNDYDENRLIVSYTLP 145

3wi5\_A 078 EVAATLAYRF--G--N-VTPRVSYAHGFKGLVAKADIGNRYDQVVVGAEYDFS 125

## PDB1: 4aui\_A

## PDB2: 4ft6\_A

## row number: 102

4aui\_A 000 KHQVHRLVGGYDHDALYASVAVQQQDAKLTWR----------D-----DNSHNSQTEVATTVAYRFGN-----VTPRVSYAHGFKGSVYDADHDNTYDQV 080

4ft6\_A 000 ENRALTGFFSATRGGHSLGAGYQRMYGDDGMLYIAGTSTPLVNDIQVRNFTSAGERSWQLRYDYDFVALGIPGLTAMARYASGAHARTK-AMDDGRAWER 099

4aui\_A 081 VVGAEYDFS----KRTSALVSAGWLQKGKGAEKFVATVGGVGLRHKF 123

4ft6\_A 100 DVDVAYVIQSGPLKNLGLRWRNAMLRSNHA---ADVDENRLILSYSL 143

## PDB1: 4aui\_A

## PDB2: 5ldv\_A

## row number: 103

4aui\_A 000 HQVHRLVGGYDH-DALYASVAVQQQDAKLTWRDD--NSHNSQTEVATTVAYRFG-NVTPRVSYAHGFK 64

5ldv\_A 000 NIFGYVTGGYTFNETVRVGADFVYGGTKT--EATTHLGGGKKLEAVARVDYKYSPKLNFSAFYSYVNL 66

## PDB1: 5dl5\_A

## PDB2: 6ehb\_A

## row number: 104

5dl5\_A 000 KTNNIWAISGTYATG--PHSVMLAYQQNTGNVGYDYGQNADGFQSIYLP-NSYMSDF-IGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNV 096

6ehb\_A 000 NGEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEYMLAAS-YRMENLYFAGLFTDGELAKDVDYTGYELAAGYKLG-----Q-AAFTATYNNAETA----- 088

5dl5\_A 097 TDDAQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 155

6ehb\_A 089 -KKTSADNFAIDATYYFK----PNFRSYISYQFNLLDSDKA-SKVASEDELAIGLRYDF 141

## PDB1: 2por\_A

## PDB2: 3jty\_A

## row number: 105

2por\_A 000 DAQEMAVAAAYTFGNYTVGLGYEKIDSPDT-------------A-------LMADMEQLELAAIAKFG-----ATNVKAYYADGELD 62

3jty\_A 000 ENRTWSGLFSAKYGGNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNV 87

## PDB1: 2y0l\_A

## PDB2: 4aui\_A

## row number: 106

2y0l\_A 000 DNKSLNGMFTYSLGNHAFGAAWQRMNGDDAFPYLEGSNPYLVNFVQVNDFAGPKERSWQLRYDYDFVGLGIPGLTFMTRYVKGDNVELAGQSGEGREWER 100

4aui\_A 000 KHQVHRLVGGYDHDALYASVAVQQQDAKLTW----RD----DN-------SHNSQTEVATTVAYRFG-----NVTPRVSYAHGFKGSVYDADHDNTYDQV 080

2y0l\_A 101 NTELQYVFQSGALKNLGIRWRNATFRSNF---TRDIDENRLIVSYTL 144

4aui\_A 081 VVGAEYDFS----KRTSALVSAGWLQKGKGAEKFVATVGGVGLRHKF 123

## PDB1: 3sys\_A

## PDB2: 5nxr\_A

## row number: 107

3sys\_A 000 DGFNYAGAEYRFNRERTQLGLWHGQLEDV----------------------YRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAAR---AGEIDSHTVYG 075

5nxr\_A 000 GDGYGFSTAYELG-WGVTLGGGYSSSSRTPNQKAGVVTSEGDSYYSATGKRAQAWNVGGKFDA--NN--VYLAAMYGQTQNTSRYGDLDLIANKTENVEL 095

3sys\_A 076 LFSAGIG-LHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNAT 156

5nxr\_A 096 VAQYLFDFGLKPSIGYNQSKGKNLG------NG----------YDNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLKD 157

## PDB1: 3nsg\_A

## PDB2: 3szd\_A

## row number: 108

3nsg\_A 000 DRAESRAVGAKYDANNVYLAAVYAETRNMSIVENT-----V---T---DTVEMANKTQNLEVVAQYQFD----FGLRPAISYVQSKGKQLNGAGGSADLA 085

3szd\_A 000 LDNRTVSALFSARYGLHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHVRLAG-VTDDGSE 099

3nsg\_A 086 KYIQAGATYYFN----KNMNVWVDYRFNLLDE 113

3szd\_A 100 WGRESELGYTLQSGAFKRLNVRWRNSSQRRDW 131

## PDB1: 3syb\_A

## PDB2: 4d65\_A

## row number: 109

3syb\_A 000 IDNDTWSLAFTLGHRAHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWDIDGTHYDGDRNGAY 100

4d65\_A 000 KRAEAWNVGSKLELDELYLAAMYGQTLNTTRFGDD----D--------AEAIANKTENLELVALYSFD----FGLTPSIGYNQSKGKNLGNY-------- 076

3syb\_A 101 GNYAEVRAQDGEKHHELGLMAAYKVQNGPIKDSTFKLTYMMHKASQ 146

4d65\_A 077 --------GNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLKD 110

## PDB1: 3t0s\_A

## PDB2: 5fvn\_A

## row number: 110

3t0s\_A 000 RQHYLGLLHTLPLGEGLSLRSDLRYFDSGEDGAA----ISGPVDNRNLNAMLTLRAGAHAFGIGVQKMIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEK 096

5fvn\_A 000 DGVGGSITYNL--GE--GFGIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDANNIYLAAQYTQTYNATRVG------N----------LGWANKAQ 080

3t0s\_A 097 SWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGA-GRADDSEWERNTDLSYVIQSGPLKSVALKWRNITYRSR 168

5fvn\_A 081 NFEVVAQYQFD----FGLRPSVAYLQSKGKDLENGYGDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLD 145

## PDB1: 2zfg\_A

## PDB2: 3sys\_A

## row number: 111

2zfg\_A 000 GDGVGGSISYEYE--GFGIVGAYGAADRTNLQEAQPLGNGKKAEQWATGLKYDA--NN--IYLAANYGETRNATPITNKFTNTSGFANKTQDVLLVAQYQ 094

3sys\_A 000 DGFNYAGAEYRFNRERTQLGLWHGQLEDV-------------YRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAAR-------AGEIDSHTVYGLFSAG 080

2zfg\_A 095 FDFGLRPSIAYTKSKAKDV-------EG----------IGDVDLVNYFEVGATYYFN----KNMSTYVDYIINQID 149

3sys\_A 081 IGL-HTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNA 155

## PDB1: 3jty\_A

## PDB2: 5fvn\_A

## row number: 112

3jty\_A 000 QFINLIHSQPLGDWTLGANLGFFYGKEDGSA----RAGDMENRTWSGLFSAKYGGNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQ 096

5fvn\_A 000 VGGSITYNL--GE-GFGIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDANNIYLAAQYTQTYNATRVG-----------N-----LGWANKAQNFE 081

3jty\_A 097 VRHDYNFAALGVPGLTLMNRYISGSNVHTAT--VSDGKEWGRESEVAYTVQSGTLKNLNLKWRNSTMRRDF 165

5fvn\_A 082 VVAQYQFD----FGLRPSVAYLQSKGKDLENGYGDQDLLKYVDVGATYYF----NKNMSTYVDYKINLLDD 144

## PDB1: 3szd\_A

## PDB2: 4d65\_A

## row number: 113

3szd\_A 000 LDNRTVSALFSARYGLHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHVRLAGVTDDGSEW 100

4d65\_A 000 KRAEAWNVGSKLELDELYLAAMYGQTLNTTRFG----D--D---D----AEAIANKTENLELVALYSFD----FGLTPSIGYNQSKGKNLGNYGNKDLVK 083

3szd\_A 101 GRESELGYTLQSGAFKRLNVRWRNSSQRRDW 131

4d65\_A 084 YIAVGASYDFN----KNMAAVIDYKINLLKD 110

## PDB1: 3szd\_A

## PDB2: 4d65\_A

## row number: 114

3szd\_A 000 DRFDFAGGEYRFNGERSLLGLWNAELKD--------------IYRQQYLQLQHSQPLGDWLLGANLGGFRGRDAGSAR-----AGKLDNRTVSALFSARY 081

4d65\_A 000 GDGYGFSTAYELGWGL-SIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLEL--D--ELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYSF 095

3szd\_A 082 G-LHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHV 155

4d65\_A 096 DFGLTPSIGYNQSKGKNL-------G-N---Y------GNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLK 149

## PDB1: 4aui\_A

## PDB2: 4frt\_A

## row number: 115

4aui\_A 000 ESYHAGFNYKND---GFFVQYAGSYKRHNYT---TEKHQVHRLVGGYDHDALYASVAVQQQDAKLTW----RD----DN-------SHNSQTEVATTVAY 079

4frt\_A 000 RQHHLGVQHLLPLADDQSLKSDIRWARSTDEGGSRVNNRALNALFTYRLGGHAFGLGYQRMSGDSGFAYLAGTDPYLVNFVQIGDFANKDERSWQLRYDY 100

4aui\_A 080 RFG-----NVTPRVSYAHGFKGSVYDADHDNTYDQVVVGAEYDFS----KRTSALVSAGWLQKGKGAEKFVATVGGVGLRHKF 153

4frt\_A 101 DFAAIGLPGLTFMSRYLRGEHIDLLDGGGRGKEWERDTDIAYLVQSGPLKNLGIKLRNGTFRSDFG---NDIDETRLIVSYAL 180

## PDB1: 5dl6\_A

## PDB2: 5fvn\_A

## row number: 116

5dl6\_A 000 DNDLYHAHFELKHQ-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKERE 099

5fvn\_A 000 NGDGVGGSITYNLGEGFGIGTAVSSSKRTSSQN-----D--L-T-----YGNGDRAETYTGGLKYDAN----NIYLAAQYTQTYNATRVGNLGWANKAQN 083

5dl6\_A 100 TDFDLGYTVQSGWLKNLGLRARYAIYDNNMLST--ANIKPVNETRINIDYTW 149

5fvn\_A 084 FEVVAQYQFD----FGLRPSVAYLQSKGKDLENGYGDQDLLKYVDVGATYYF 131

## PDB1: 2fgr\_A

## PDB2: 3sys\_A

## row number: 117

2fgr\_A 000 DRDEITLGASYNFGVAKLSGLLQQTKFKRDI-------------G------GDIKTNSYMLGASAPVG----GVGEVKLQYALYDQKAI----DSKAHQI 073

3sys\_A 000 DSHTVYGLFSAGIGLHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKAGSGGKEWER 100

2fgr\_A 074 TLGYVHNLS----KRTALYGNLAFLKNK 97

3sys\_A 101 DVELGYTVQSGPLARLNVRLNHASNRRS 128

## PDB1: 2zfg\_A

## PDB2: 3sys\_A

## row number: 118

2zfg\_A 000 KKAEQWATGLKYDANNIYLAANYGETRNATPITNK--------FTN---TSGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEGIGDVDLVN 085

3sys\_A 000 IDSHTVYGLFSAGIGLHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTK-AGSGGKEW 099

2zfg\_A 086 YFEVGATYYFN----KNMSTYVDYIINQID 111

3sys\_A 100 ERDVELGYTVQSGPLARLNVRLNHASNRRS 129

## PDB1: 3syb\_A

## PDB2: 6ehb\_A

## row number: 119

3syb\_A 000 DNDTWSLAFTLGHR--AHALTLAYQQVDGNEYFDYVHET-SAIFLANSM--LADY-NSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWDIDGTHYDGD 094

6ehb\_A 000 GEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEYMLAASYRMENLYFAGLFTDGELAKDVDYTGYELAAGYKLGQ-----AAFTATYNNAETAK------- 088

3syb\_A 095 RNGAYGNYAEVRAQDGEKHHELGLMAAYKVQNGPIKDSTFKLTYMMHKASQ 145

6ehb\_A 089 ---------------KTSADNFAIDATYYFK----PNFRSYISYQFNLLDS 120

## PDB1: 3syb\_A

## PDB2: 6ehd\_A

## row number: 120

3syb\_A 000 RLNYLGGNYKPLDGLEISLYGSHFQD---------------------VWNQYYLGVTHDIGDLENGIALRTAFNGYHTGDTGAREAGYIDNDTWSLAFTL 079

6ehd\_A 000 ELAELYVGATF-GDLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTIG------DALIGVTYYNAELDVENNPLVIDEDAISVAGTY 093

3syb\_A 080 GHR-AHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWDI 154

6ehd\_A 094 KVADKTKLYAGYEYVMQEANT------------------GADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGT 147

## PDB1: 3szv\_A

## PDB2: 5mdo\_A

## row number: 121

3szv\_A 000 AFDFAGGDYRLTPALTASLHQGRLKDI--------YRQTFAGLVHTLDLGGQRSLKSDLRFARASEDGGF-RELDNRAFGALFSLRLGAHAVAAGYQRIS 091

5mdo\_A 000 YWGGIAAHYKL-GPLQLDAAYEGNRNIEAEGQTWENNTYLVGVQGWFE--N--GISFFAQYKYMEADASNGVNEKQDAMSAGLMYTTGDWQYKLGYAANF 095

3szv\_A 092 GDDPYPYIAGSDPYLVNFIQIGDFGNVDERSWQLRYDYDFGALGLPGLSFMSRYVSGDNV 151

5mdo\_A 096 DLERD----G-----------KTLSNTSDDVVSAQIMYFVD----PSAVLYARARMNDFN 136

## PDB1: 5dl6\_A

## PDB2: 5mdo\_A

## row number: 122

5dl6\_A 000 VDNDLYHAHFELKHQ-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKER 099

5mdo\_A 000 WENNTYLVGVQGWFENGISFFAQYKYMEADASN------------------GVNEKQDAMSAGLMYTTG---D-WQYKLGYAANFDLERDGKTLSNTSDD 078

5dl6\_A 100 ETDFDLGYTVQSGWLKNLGLRARYAIYDNNMLS----------TANIKPVNETRINIDYTW 150

5mdo\_A 079 VVSAQIMYFVD----PSAVLYARARMNDFNEGLDGLDDAARWTSGTNGDYNEYSVGVEYYF 135

## PDB1: 2por\_A

## PDB2: 5dl5\_A

## row number: 123

2por\_A 000 DAQEMAVAAAYTFGNYTVGLGYEKIDSPDT----------A------------LMADMEQLELAAIAKF------GATNVKAYYADGELDRDFARAVFDL 072

5dl5\_A 000 TNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRN------ 094

2por\_A 073 TPVAAAATAVDHKAYGLSVDSTF--GA---TTVGGYVQVLDID------TIDDVTYYGLGASYDL 126

5dl5\_A 095 -----VTDDAQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 154

## PDB1: 3jty\_A

## PDB2: 6ehd\_A

## row number: 124

3jty\_A 000 FNFQGAEYAFNDKRTQIALWNAQLKDI---------------------YSQQFINLIHSQPLGDWTLGANLGFFYGKEDGSARAGDMENRTWSGLFSAKY 079

6ehd\_A 000 LAELYVGATFG--DLAVHAGGGQNRDKAFKVGSNTVGTTTTDIKADVTNSYFEVTGEYTI--G--DALIGVTYYNAELDVENNPLVIDEDAISVAGTYKV 094

3jty\_A 080 G-GNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNV 153

6ehd\_A 095 ADKTKLYAGYEYVMQEANT------------G-------ADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGT 146

## PDB1: 4frx\_A

## PDB2: 5fvn\_A

## row number: 125

4frx\_A 000 SNKFYYAGGDYKVNKDLTLQYYYGNLDDF-------------YKQHFLGLIHNWQIGPGVLKTDLRAFDSSSDGKNGSRSGRADGYVSSGYYGSGVTKGE 087

5fvn\_A 000 NGDGVGGSITYNLGEGFGIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDA--N--NIYLAAQYTQTYNATRVGN------------------LGWA 078

4frx\_A 088 VDNRAFSGLFTYTVS-GHSIGAGYQILNGDSDFPFLNRGDGEGSTAYLITDVQIGKFQRAGERTWQVRYGYDFATVGVPGLTFNTIYLSGDKI 179

5fvn\_A 079 NKAQNFEVVAQYQFDFGLRPSVAYLQSKGKDLE---N------G-----------YGDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLD 147

## PDB1: 2fgr\_A

## PDB2: 3t0s\_A

## row number: 126

2fgr\_A 000 GRYIGGYVAYDN-GPLSASLGLAQQKTAVGGLATDRDEITLGASYN--FG---VAKLSGLLQQTKFKRDI-GGDIKTNSYMLGASAPVGGVGEVKLQYAL 093

3t0s\_A 000 DEFNLAGATYAFTPRLSASYYYGQLKDIY-----RQH--YLGLLHTLPLGEGLSLRSDLRYFDSGEDGAAISGPVDNRNLNAMLTLRAGA-HAFGIGVQK 092

2fgr\_A 094 YDQKA----------------------IDSKAHQITLGYVHNLS----KRTALYGNLAFLKN 129

3t0s\_A 093 MIGNDAFPVLNGYTTPYVANLMAYQTFTRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRD 154

## PDB1: 2zfg\_A

## PDB2: 5dl5\_A

## row number: 127

2zfg\_A 000 NGDGVGGSISYEYEGFGIVGAYGAADRTNLQE--------AQP---L-----GNGKKAEQWATGLKYDA------NNIYLAANYGETRNATPITNKFTNT 078

5dl5\_A 000 TNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRN------ 094

2zfg\_A 079 SGFANKTQDVLLVAQYQF--D--FGLRPSIAYTKSKAKDVEGIGDVDLVNYFEVGATYYF 134

5dl5\_A 095 VTDDAQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 154

## PDB1: 2zfg\_A

## PDB2: 5dl6\_A

## row number: 128

2zfg\_A 000 NGDGVGGSISYEYEGFGIVGAYGAADRTNLQEA----Q--P-------LGNGKKAEQWATGLKYDAN----NIYLAANYGETRNATPITNKFTNTSGFAN 083

5dl6\_A 000 DNDLYHAHFELKHQNHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNL-----GGTNL 095

2zfg\_A 084 KTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEGIGDVDLVNYFEVGATYYF 134

5dl6\_A 096 KERETDFDLGYTVQSGWLKNLGLRARYAIYDNNMLST-ANIKPVNETRINIDYTW 149

## PDB1: 3sy7\_A

## PDB2: 4d65\_A

## row number: 129

3sy7\_A 000 RQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKAK-----AGDISNTTWSLAAAYTLDAHTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQY 095

4d65\_A 000 DGYGFSTAYELG----WGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLELDELYLAAMYGQTLNTTRFG------------DD----DA---- 076

3sy7\_A 096 SDFNGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDIDGTKMSDNNVGYKNYGYGEDGKHHETNLEAKYVVQSGPAKDLSFRIRQAWHRANA 189

4d65\_A 077 -EAIANKTENLELVALYSFD----FGLTPSIGYNQSKGKNLGN------------YGNKDLVKYIAVGASYDF----NKNMAAVIDYKINLLKD 149

## PDB1: 3szd\_A

## PDB2: 5fvn\_A

## row number: 130

3szd\_A 000 DRFDFAGGEYRFNGERSLLGLWNAELKDI-------------YRQQYLQLQHSQPLGDWLLGANLGGFRGRDAGSA--RAGKLDNRTVSALFSARYG-LH 084

5fvn\_A 000 GDGVGGSITYNLGEGF-GIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDA--N--NIYLAAQYTQTYNATRVGNLGWANKAQNFEVVAQYQFDFGL 095

3szd\_A 085 TLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHV 155

5fvn\_A 096 RPSVAYLQSKGKDL-E-----N-G---Y------GDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLD 146

## PDB1: 1pho\_A

## PDB2: 3szd\_A

## row number: 131

1pho\_A 000 NGDGFGTSLTYDFGGSDF-AISGAYTNSDRTNEQNLQSRGTGKRAEAWATGLKYDAN----NIYLATFYSETRKMTPITGGFANKTQNFEAVAQYQFDFG 095

3szd\_A 000 SDRFDFAGGEYRFNG-ERSLLGLWNAELKDI-------------YRQQYLQLQHSQPLGDWLLGANLGGFRGRDAGSA-RAGKLDNRTVSALFSARYG-L 084

1pho\_A 096 LRPSLGYVLSKGKDIE--------G---I------GDEDLVNYIDVGATYYFN----KNMSAFVDYKINQLD 146

3szd\_A 085 HTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHV 156

## PDB1: 2fgr\_A

## PDB2: 5dl6\_A

## row number: 132

2fgr\_A 000 TDRDEITLGASYNFGVAKLSGLLQQTKFKRDIGGDIKTNSYMLGASAPVGGVGEVKLQYALYDQKAIDSKAHQITLGYVHNLS---KRTALYGNLAFLKN 97

5dl6\_A 000 VDNDLYHAHFELKHQNHKFIFGTFQHHGDTA-------------FPYLTGGETGLLID-TWPG-EFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHN 85

## PDB1: 3jty\_A

## PDB2: 6ehb\_A

## row number: 133

3jty\_A 000 ENRTWSGLFSAKYG--GNTFYVGLQKLTGDSAWMRVNG--TSGGTLANDSYNASY-DNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNVHTATVSDG 095

6ehb\_A 000 GEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEYMLAASYRMENLYFAGLFTDGELAKDVDYTGYELAAGYKLG----Q-AAFTATYNNAETAK-----KT 090

3jty\_A 096 KEWGRESEVAYTVQSGTLKNLNLKWRNSTMRRDF 129

6ehb\_A 091 SADNFAIDATYYFK----PNFRSYISYQFNLLDS 120

## PDB1: 3nsg\_A

## PDB2: 3sy7\_A

## row number: 134

3nsg\_A 000 GLSFGIQYQGKNQDNHSINSQNGDGVGYTMAYEFD---GFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDANNVYLAAVYAETRNMSIVEN---- 093

3sy7\_A 000 NLSASLYGAELEDIY------RQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKAK---AGDISNTTWSLAAAYTLDAHTFTLAYQKVHGDQPFDYIGFG 091

3nsg\_A 094 --------T---VTD----TVEMANKTQNLEVVAQYQFD----FGLRPAISYVQSKGKQLNGA-----------GGSADLAKYIQAGATYYF----NKNM 159

3sy7\_A 092 RNGSGAGGDSIFLANSVQYSDFNGPGEKSWQARYDLNLASYGVPGLTFMVRYINGKDIDGTKMSDNNVGYKNYGYGEDGKHHETNLEAKYVVQSGPAKDL 191

3nsg\_A 160 NVWVDYRFNLLDE 172

3sy7\_A 192 SFRIRQAWHRANA 204

## PDB1: 3nsg\_A

## PDB2: 5dl6\_A

## row number: 135

3nsg\_A 000 GDGVGYTMAYEF-DGFGVTAAYSNSKRTNDQQDRDGNGDRAESRAVGAKYDA--N---NVYLAAVYAETRNMSIVENTVTDTVEMANKTQNLEVVAQYQF 094

5dl6\_A 000 DGLYYLGGNYQFNPALKLTAFYMDVDD------------LYNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAK-------AGLVDNDLYHAHFELKH 081

3nsg\_A 095 DFGLRPAISYVQSKGKQLNG--------A-------GGSADLAKYIQAGATYYFN---KNMNVWVDYRFNLLDENDYSSSYVGTDDQAAVGITYQF 172

5dl6\_A 082 Q-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKERETDFDLGYTV 176

## PDB1: 3sy9\_A

## PDB2: 6ehd\_A

## row number: 136

3sy9\_A 000 IDNNTYSLHFAVGYRQHTVTAVLQKVNGNTPFDYINQGDSIFLDNSQQYSDFNGPNEKSWKLQYDYDFVALGVPGLSASASYSRGKLDLTRVDPDSPGYG 100

6ehd\_A 000 VTNSYFEVTGEYTIGDALIGVTYYNAELDVEN-------N-----------PLVIDEDAISVAGTYKVA----DKTKLYAGYEYVMQEAN---------- 068

3sy9\_A 101 GWYSADGKNAKHWERDLDLQYVVQGGPAKDLSLRLRWATHRGTG 144

6ehd\_A 069 -----TGADEDGTLVYLGVEYKFA----SWARVYAEYGYGDGTT 103

## PDB1: 4afk\_A

## PDB2: 6ehd\_A

## row number: 137

4afk\_A 000 EAPKNFGLDVKITGESENDRDLGTAPGGTLNDIGIDLRPWAFGQWG-DWSAYFMGQAVAATDTIETDTLQSDTDDGNNSRNDGREPDKSYLAAREFWVDY 099

6ehd\_A 000 AGTVDFYGQLRTELKFLEDKD------PTIGSGSSRAGVDANYTVNDSLALQGKVEFALK--------------------------DSGDMYVRNHILGV 068

4afk\_A 100 AGLTAYPGEHLRFGRQRLREDS 121

6ehd\_A 069 KT----NFGKFSFGKQWTTSDD 86

## PDB1: 4d65\_A

## PDB2: 4ft6\_A

## row number: 138

4d65\_A 000 KLDVYGQIDVRHYFADAKSG----EDGDDSRVRLGFKGDTQITDQ-LIGFGRFEWET--STN-K---------------AETSNDNQNRLAYAGLKFADY 077

4ft6\_A 000 DASVSLGLRNLYFNRDFRQPGAAQSKQEEWAQGFLLQAKSGYTQGTLGLGVELIGQLGLKLDSSPDRAGSGLLPRHADGRAADDYARLGVA-PKLKL-SN 098

4d65\_A 078 GSLDYGRNYGV 88

4ft6\_A 099 TELKLGELLPE 109

## PDB1: 4fso\_A

## PDB2: 5mdo\_A

## row number: 139

4fso\_A 000 FDAYQLDYQVNDGLLLQYAQGGLRNV--------YRQRYLGAVGKRQVGAGKLSADLRWFDSEDAGAARAGKIDNRALSLLLAYAQGGHTLSAGWQRMNG 092

5mdo\_A 000 WGGIAAHYKL-GPLQLDAAYEGNRNIEAEGQTWENNTYLVGVQGWFE--N-GISFFAQYKYMEADASN-GVNEKQDAMSAGLMYTTGDWQYKLGYAANFD 095

4fso\_A 093 ASSMPYLDGSNPYLANYLQVNDFANPEERSWQLRYDFDLRSVGVPGLSFMTRYVNGDH 150

5mdo\_A 096 LERD----G-----KTL------SNTSDDVVSAQIMYFVD----PSAVLYARARMNDF 134

## PDB1: 1pho\_A

## PDB2: 5dl5\_A

## row number: 140

1pho\_A 000 NGDGFGTSLTYDFGGSDFAISGAYTNSDRTNEQN------L-Q-----SR----GTGKRAEAWATGLKYDA------NNIYLATFYSETRKMTPITGGFA 078

5dl5\_A 000 TNNIWAISGTYATGP--HSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNVTDD 098

1pho\_A 079 NKTQNFEAVAQYQFD----FGLRPSLGYVLSKGKDIEGIGDEDLVNYIDVGATYYF 130

5dl5\_A 099 AQEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 154

## PDB1: 2zfg\_A

## PDB2: 3syb\_A

## row number: 141

2zfg\_A 000 NGDGVGGSISYEY-EGFGIVGAYGAADRTNLQEAQPLGNGKKAEQWATGLKYDAN----N--IYLAANYGETRNATPITNKFTNTSGFANKTQDVLLVAQ 093

3syb\_A 000 GDRLNYLGGNYKPLDGLEISLYGSHFQDV-------------WNQYYLGVTHDIGDLENGIALRTAFNGYHTGDTGARE-------AGYIDNDTWSLAFT 080

2zfg\_A 094 YQFDFGLRPSIAYTKSKAKDVE-------G----I-----GDVDLVNYFEVGATYYFN----KNMSTYVDYIINQI 149

3syb\_A 081 LGHR-AHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWD 155

## PDB1: 4frt\_A

## PDB2: 5mdo\_A

## row number: 142

4frt\_A 000 RFDFAGGTYRWSERLSSSYHYANLEDF--------YRQHHLGVQHLLPLADDQSLKSDIRWARSTDEGG--SRVNNRALNALFTYRLGGHAFGLGYQRMS 090

5mdo\_A 000 YWGGIAAHYKL-GPLQLDAAYEGNRNIEAEGQTWENNTYLVGVQGWFE--N--GISFFAQYKYMEADASNGVNEKQDAMSAGLMYTTGDWQYKLGYAANF 095

4frt\_A 091 GDSGFAYLAGTDPYLVNFVQIGDFANKDERSWQLRYDYDFAAIGLPGLTFMSRYLRGEH 149

5mdo\_A 096 DLERD----G-----K------TLSNTSDDVVSAQIMYFVD----PSAVLYARARMNDF 135

## PDB1: 5dl6\_A

## PDB2: 5mdo\_A

## row number: 143

5dl6\_A 000 NDLYHAHFELKHQNHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKERETD 100

5mdo\_A 000 DYWGGIAAHYKLGPLQLDAAYEGNRNIEA-------E----G-------QTWENNTYLVGVQGWFE---NGISFFAQYKYMEADASN---GVNEKQDAMS 076

5dl6\_A 101 FDLGYTVQSGWLKNLGLRARYAIYDNNMLS--TANIKPVNETRINIDYTW 148

5mdo\_A 077 AGLMYTT--G--D-WQYKLGYAANFDLERDGKTLSNTSDDVVSAQIMYFV 121

## PDB1: 5dl6\_A

## PDB2: 5mdo\_A

## row number: 144

5dl6\_A 000 PKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHN 32

5mdo\_A 000 TSDDVVSAQIMYFVD---PSAVLYARARMNDF 29

## PDB1: 2zfg\_A

## PDB2: 3jty\_A

## row number: 145

2zfg\_A 000 GDGVGGSISYEYE--GFGIVGAYGAADRTNLQEAQPLGNGKKAEQWATGLKYDA--N--NIYLAANYGETRNATPITNKFTNTSGFANKTQDVLLVAQYQ 094

3jty\_A 000 DRFNFQGAEYAFNDKRTQIALWNAQLKDI-------------YSQQFINLIHSQPLGDWTLGANLGFFYGKEDGSAR-------AGDMENRTWSGLFSAK 080

2zfg\_A 095 FDFGLRPSIAYTKSKAKDV------EG-----I------GDVDLVNYFEVGATYYFN----KNMSTYVDYIINQI 148

3jty\_A 081 YGG-NTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSN 154

## PDB1: 3a2s\_X

## PDB2: 5dl7\_A

## row number: 146

3a2s\_X 000 RESYHAGLKYENAGFFGQYAGSFAKYADLNTDAERVAVNTANAHPVKDYQVHRVVAGYDAN---DLYVSVAGQYEAAKNNEVGSIKGKKHEQTQVAATAA 097

5dl7\_A 000 DSFYTLGGSYQLKDYRLRAY-----HAELK----------------DIYQQQFLGFNGKQPLNDQLNFLSDVRFFNSEETGSK--KIGEVDNRHISGLFG 077

3a2s\_X 098 YRFGNVTPRVSYAHGFKAKV----NGV------K-----DANYQYDQVIVGADYDFSK---------RTSALVSAGWLKQG 154

5dl7\_A 078 LNYQNHTVSLGYMQSFGSTGLPFLSGTESPVVLDFMSSDYSNKDEKVYSIRYEYDFKNARIGDVSLNGLRFMTRYAKGEDI 158

## PDB1: 3a2s\_X

## PDB2: 4fso\_A

## row number: 147

3a2s\_X 000 KDYQVHRVVAGYDANDLYVSVAGQYEAAKNNEVG------S----IK-----GKKHEQTQVAATAAYRFG----N-VTPRVSYAHGFKAKVNGVKDANYQ 080

4fso\_A 000 IDNRALSLLLAYAQGGHT--LSAGWQRMNGASSMPYLDGSNPYLANYLQVNDFANPEERSWQLRYDFDLRSVGVPGLSFMTRYVNGDHIRLA--NGDEGK 096

3a2s\_X 081 YDQVIVGADYDFS----KRTSALVSAGWLKQGKGAGKVEQTASMVGLRHKF 127

4fso\_A 097 EWERDIELKYIVQSGRFKDLSLRLRNATYRTDFERSARDVDEVRLIASYNL 147

## PDB1: 3sys\_A

## PDB2: 4d65\_A

## row number: 148

3sys\_A 000 DSHTVYGLFSAGIGLHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKA-GSGGKEWE 099

4d65\_A 000 RAEAWNVGSKLELDELYLAAMYGQTLNTTRFG----D----DD-----AEAIANKTENLELVALYSFD----FGLTPSIGYNQSKGKNLGNYGNKDLVKY 083

3sys\_A 100 RDVELGYTVQSGPLARLNVRLNHASNRRS 128

4d65\_A 084 IAVGASYDFN----KNMAAVIDYKINLLK 108

## PDB1: 2por\_A

## PDB2: 3sy7\_A

## row number: 149

2por\_A 000 QEMAVAAAYTF--G---NYTVGLGYEKIDSPDT--ALMADMEQLELAAIAKFGATNVKAYYADGELDRDFARAV-------------FDLTPV-AAAATA 079

3sy7\_A 000 RQYYLNSNYTIPLASDQSLGFDFNIYRTNDEGKAKAGDISNTTWSLAAAYTLDAHTFTLAYQKVHGDQPFDYIGFGRNGSGAGGDSIFLANSVQYSDFNG 100

2por\_A 080 VDHKAYGLSVDSTFG----A-TTVGGYVQVLDID------------------TIDDVTYYGLGASYDL----GGGASIVGGIADNDLP 140

3sy7\_A 101 PGEKSWQARYDLNLASYGVPGLTFMVRYINGKDIDGTKMSDNNVGYKNYGYGEDGKHHETNLEAKYVVQSGPAKDLSFRIRQAWHRAN 188

## PDB1: 3a2s\_X

## PDB2: 3syb\_A

## row number: 150

3a2s\_X 000 RESYHAGLKYEN-AGFFGQYAGSFAKYADLNTDAERVAVNTANAHPVKDYQVHRVVAGYDAN----DLYVSVAGQYEAAKNNEVGSIKGKKHEQTQVAAT 095

3syb\_A 000 DRLNYLGGNYKPLDGLEISLY-----GSHFQ----------------DVWNQYYLGVTHDIGDLENGIALRTAFNGYHTGDTGAR--EAGYIDNDTWSLA 077

3a2s\_X 096 AAYRFGNVTPRVSYAHGFKAKV----N---G---V-----KDANYQYDQVIVGADYDFS----KRTSALVSAGWLKQ 153

3syb\_A 078 FTLGHRAHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWD 154

## PDB1: 3t0s\_A

## PDB2: 6ehb\_A

## row number: 151

3t0s\_A 000 DNRNLNAMLTLRAG--AHAFGIGVQKMIGNDAFPVLNG--YTTPYVANLMAYQTF-TRPQEKSWQLRYDYDFAGLGLPGLNLMTRYVQGRDIDRGAGRAD 095

6ehb\_A 000 GEDGYSLSAIYTFGDTGFNVGAGYADQDDQNEYMLAASYRMENLYFAGLFTDGELAKDVDYTGYELAAGYKLGQ-----AAFTATYNNAETAK------K 089

3t0s\_A 096 DSEWERNTDLSYVIQSGPLKSVALKWRNITYRSR 129

6ehb\_A 090 TSADNFAIDATYYFK----PNFRSYISYQFNLLD 119

## PDB1: 3t24\_A

## PDB2: 5mdo\_A

## row number: 152

3t24\_A 000 FDFAGGSYKWTDNLSTSYHYGKLDNF--------YKQHYLGLVHTLPIADKQSLKSDIRWARSTDDGS--SNVDNKALNAMFTYSLGYHAFGVGYQKMSG 090

5mdo\_A 000 WGGIAAHYKL-GPLQLDAAYEGNRNIEAEGQTWENNTYLVGVQGWFE--N--GISFFAQYKYMEADASNGVNEKQDAMSAGLMYTTGDWQYKLGYAANFD 095

3t24\_A 091 DTGFAYINGADPYLVNFIQIGDFANKDEKSWQARYDYNFAGVGIPGLTFMTRYVKGDNID 150

5mdo\_A 096 LERD----G-----------KTLSNTSDDVVSAQIMYFVDP----SAVLYARARMNDFNE 136

## PDB1: 2fgr\_A

## PDB2: 3syb\_A

## row number: 153

2fgr\_A 000 GRYIGGYVAYDNGPLSASLGLAQQKTAVG--------G-----------LATDRDEITLGASYNFG-----VAKLSGLLQQTKF 60

3syb\_A 000 NDTWSLAFTLGHRAHALTLAYQQVDGNEYFDYVHETSAIFLANSMLADYNSPNEKSAQIRYETDWSYYGVPGLSTGVWYVKGWD 84

## PDB1: 3szd\_A

## PDB2: 5nxr\_A

## row number: 154

3szd\_A 000 LDNRTVSALFSARYG-LHTLYLGLQKVSGDDGWMRVNGTSGGTLANDSYNASYDNPGERSWQLRYDFDFVGLGLPGLTFMTRYLHGDHV 88

5nxr\_A 000 NKTENVELVAQYLFDFGLKPSIGYNQSKGKNLG------N-G---Y------DNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLK 69

## PDB1: 3wi5\_A

## PDB2: 5dl5\_A

## row number: 155

3wi5\_A 000 EKYQIHRLVSGYDNDALYASVAVQQQDAKLTD-------A--S----N------SHNSQTEVAATLAYRFG-----N-VTPRVSYAHGFKGLVAKADIGN 075

5dl5\_A 000 KTNNIWAISGTYATGPHSVMLAYQQNTGNVGYDYGQNADGFQSIYLPNSYMSDFIGNHEKSAQIQYNVDFGKLGVLPGLNWTTAFVYGWDIKVRNVTDDA 100

3wi5\_A 076 RYDQVVVGAEYDFS----KRTSALVSAGWLQEGKGE---NKFVATAGGVGLRHKF 123

5dl5\_A 101 QEREFFNQVKYTVQSGFAKDASLRIRNSYYRASDAYQGAYIGDTNEWRIFLDIPV 155

## PDB1: 2zfg\_A

## PDB2: 3jty\_A

## row number: 156

2zfg\_A 000 GKKAEQWATGLKYDANNIYLAANYGETRNATPITNKF--------TN---TSGFANKTQDVLLVAQYQFD----FGLRPSIAYTKSKAKDVEGIGDVDLV 085

3jty\_A 000 DMENRTWSGLFSAKYGGNTFYVGLQKLTGDSAWMRVNGTSGGTLANDSYNASYDNAKEKSWQVRHDYNFAALGVPGLTLMNRYISGSNVHTAT-VSDGKE 099

2zfg\_A 086 NYFEVGATYYFN----KNMSTYVDYIINQIDS 113

3jty\_A 100 WGRESEVAYTVQSGTLKNLNLKWRNSTMRRDF 131

## PDB1: 3a2s\_X

## PDB2: 4frt\_A

## row number: 157

3a2s\_X 000 HRVVAGYDAN---DLYVSVAGQYEAAKNNEVGSIKGKKHEQTQVAATAAYRFGNVTPRVSYAHGFKAKV----NG-----VK------DANYQYDQVIVG 082

4frt\_A 000 HHLGVQHLLPLADDQSLKSDIRWARSTDEGG-----SRVNNRALNALFTYRLGGHAFGLGYQRMSGDSGFAYLAGTDPYLVNFVQIGDFANKDERSWQLR 095

3a2s\_X 083 ADYDFS----KRTSALVSAGWLKQ 102

4frt\_A 096 YDYDFAAIGLPGLTFMSRYLRGEH 119

## PDB1: 4ft6\_A

## PDB2: 4rjw\_A

## row number: 158

4ft6\_A 000 NRALTGFFSATRGGHSLGAGYQRMYGDDGMLYIAGTSTPLVNDIQVRNFTSAGERSWQLRYDYDFVA-------------------LGIPGLTAMARYAS 081

4rjw\_A 000 DSVWGLEGAWAMGPFSAQAEYLARKLKADDN---A-------------YKDIKAKGYYAQLAYTLTGESRQYKLEGAKFDSVKPENKEIGAWEVFYRYDN 084

4ft6\_A 082 GAHARTKA--------MDDGRAWERDVDVAYVIQSGPLKNLGLRWRNAMLRSNH------AADVDENRLILSYSL 142

4rjw\_A 085 IKVEDDNVVADTATREVGDTKAKAHNLGVNWYV----NDAVKISAAYVKAKTDKITNNNGDDDGDGFVTRLQYVF 155

## PDB1: 3t24\_A

## PDB2: 4d65\_A

## row number: 159

3t24\_A 000 DNKALNAMFTYSLG-YHAFGVGYQKMSGDTGFAYINGADPYLVNFIQIGDFANKDEKSWQARYDYNFAGVGIPGLTFMTRYVKGDNI 86

4d65\_A 000 KTENLELVALYSFDFGLTPSIGYNQSKGKNLG----------------NYGNKDLVKYIAVGASYDFN----KNMAAVIDYKINLLK 67

## PDB1: 3t24\_A

## PDB2: 5fvn\_A

## row number: 160

3t24\_A 000 QHYLGLVHTLPIADKQSLKSDIRWARSTDDGS-----SNVDNKALNAMFTYSLG-YHAFGVGYQKMSGDTGFAYINGADPYLVNFIQIGDFANKDEKSWQ 094

5fvn\_A 000 TYTGGLKYDA--N---NIYLAAQYTQTYNATRVGNLGWANKAQNFEVVAQYQFDFGLRPSVAYLQSKGKDLE-------N--------GYGDQDLLKYVD 080

3t24\_A 095 ARYDYNFAGVGIPGLTFMTRYVKGDNI 121

5fvn\_A 081 VGATYYFN----KNMSTYVDYKINLLD 103

## PDB1: 3t24\_A

## PDB2: 5nxr\_A

## row number: 161

3t24\_A 000 DNKALNAMFTYSLG-YHAFGVGYQKMSGDTGFAYINGADPYLVNFIQIGDFANKDEKSWQARYDYNFAGVGIPGLTFMTRYVKGDNI 86

5nxr\_A 000 KTENVELVAQYLFDFGLKPSIGYNQSKGKNLG---------------NGYDNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLK 68

## PDB1: 5dl6\_A

## PDB2: 6ehb\_A

## row number: 162

5dl6\_A 000 DGLYYLGGNYQFNP-ALKLTAFYMDVDDLYNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAKAGLVDNDLYHAHFELKHQNHKFIFGTFQHHGDTAF 099

6ehb\_A 000 EDGYSLSAIYTFGDTGFNVGAGYADQDD-QNEYMLAASYRM--E---NLYFAGLFTDGELAK-----DVDYTGYELAAGYKLGQAAFTATYNNAETA--- 086

5dl6\_A 100 PYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNLGGTNLKERETDFDLGYTV 176

6ehb\_A 087 -------------------KKTSADNFAIDATYYFK---PNFRSYISYQFNLLDSDKA--SKVASEDELAIGLRYDF 139

## PDB1: 5ldv\_A

## PDB2: 5mdo\_A

## row number: 163

5ldv\_A 000 EEAIKDVDVSGVLRYRYDTGNFDKNFLNNSNL-NNSKQDHKYRAQVNFSAAIADN-FKAFVQFDYNAV-DGGTGVDNATNAEKGLFVRQLYLTYTNEDVA 097

5mdo\_A 000 TKDSFSYEVYGIIAMQAAYRDYDSGDAKQDDNLGGMQLNNESRIGFRGKKQFANFEPTFIWQIEGGYVDPSF------GGEGAGLGERDTFVGFESA-SW 093

5ldv\_A 098 TSVIAGKQQLN 108

5mdo\_A 094 GQVRLGRVLTP 104

## PDB1: 3sys\_A

## PDB2: 5fvn\_A

## row number: 164

3sys\_A 000 DGFNYAGAEYRFNRERTQLGLWHGQLED-------------VYRQSYANLLHKQRVGDWTLGANLGLFVDRDDGAAR--AGEIDSHTVYGLFSAGIG-LH 084

5fvn\_A 000 GDGVGGSITYNLGE-GFGIGTAVSSSKRTSSQNDLTYGNGDRAETYTGGLKYDA--N--NIYLAAQYTQTYNATRVGNLGWANKAQNFEVVAQYQFDFGL 095

3sys\_A 085 TFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKA---GSGGKEWERDVELGYT 175

5fvn\_A 096 RPSVAYLQSKGKDLE--------NG--------YGDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLDDKEFTRNAGISTDDIVALGLVYQ 169

## PDB1: 4d65\_A

## PDB2: 5dl6\_A

## row number: 165

4d65\_A 000 GDGYGFSTAYELGWGLSIGGGYSNSSRTPSQNNIKTGATGKRAEAWNVGSKLEL--D---ELYLAAMYGQTLNTTRFGDDDAEAIANKTENLELVALYSF 095

5dl6\_A 000 DGLYYLGGNYQFNPALKLTAFYMDVDD--------------LYNQTMVGALHQYKINDTTNFSSQLRYYRSRDDGQAK-----AGLVDNDLYHAHFELKH 081

4d65\_A 096 DFGLTPSIGYNQSKGKNLGN----------------YGNKDLVKYIAVGASYDFN---KNMAAVIDYKINLLKDNQFTDDYGINTDNVLGLGLIYQF 173

5dl6\_A 082 Q-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPN-LGGTNLKERETDFDLGYTV 176

## PDB1: 3sys\_A

## PDB2: 5nxr\_A

## row number: 166

3sys\_A 000 TVYGLFSAGIG-LHTFYLGLQKVGGDSGWQSVYGSSGRSMGNDMFNGNFTNADERSWQVRYDYDFVGLGWPGLIGMVRYGHGSNATTKA---GSGGKEWE 096

5nxr\_A 000 NVELVAQYLFDFGLKPSIGYNQSKGKNLGN--------G--------YDNQDLVKYISVGSYYYFN----KNMSAVVDYKINLLKDNDFTKEYGINTDNV 080

3sys\_A 097 RDVELGYT 104

5nxr\_A 081 LGLGLVYQ 88

## PDB1: 4rjw\_A

## PDB2: 5dl7\_A

## row number: 167

4rjw\_A 000 AWEVFYRYDNIKVEDDNVVADTATREVGDTKAKAHNLGVNWYVN----DAVKISAAYVKAKTDKITNNNGDDDGDGFVTRLQYVF 81

5dl7\_A 000 GLRFMTRYAKGEDIDLLQY------GDQRFKEDSLEFDLGYKIPEGKLKGLGMRARFSHYRNDMPTN-MTFHSANETRLNVDYTF 78

## PDB1: 3syb\_A

## PDB2: 4rjw\_A

## row number: 168

3syb\_A 000 EGQSLTLTTRNFYSRENMKDSFTFRIPKAGGGSQRIHQRNAWV-QGTVLKYSSGYTQGTVGFGFDVAAFNEIALERGKGRIGGGGNRTLANSDGEALGEW 099

4rjw\_A 000 FSFKLGGRLQADYSRFDGFYTK-----------NG-NTADAAYFRRAFIELGGTAYKD-WKYQINFDLSHNT-----------------------GSSDN 064

3syb\_A 100 SKLGVANIRLRAS-NTEFKAGRFLV 123

4rjw\_A 065 GYFDEASVTYTGFNPVNLKFGRFDP 89

## PDB1: 1pho\_A

## PDB2: 5ldv\_A

## row number: 169

1pho\_A 000 NKTQNFEAVAQYQFDFGLRPSLGYVLSKGKD----------------------I-E----GIGDEDLVNYIDVGATYYFNKNMSAFVD--YKINQLD 68

5ldv\_A 000 ANGNLFALKGSIEVN-GWDASLGGLYYGDKEKASTVVIEDQGNLGSLLAGEEIFYTTGSRLNGDTGRNIFGYVTGGYTFNETVRVGADFVYGGTKTE 96

## PDB1: 5dl6\_A

## PDB2: 5nxr\_A

## row number: 170

5dl6\_A 000 DNDLYHAHFELKHQ-NHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKEYVPGLCFMTRYTTGHNIYAPNL-GGTNLKER 098

5nxr\_A 000 KTENVELVAQYLFDFGLKPSIGYNQSKGKNLGN---------------GYDNQDLVKYISVGSYYYFN---KNMSAVVDYKINLLKDNDFTKEYGINTDN 082

5dl6\_A 099 ETDFDLGYTV 108

5nxr\_A 083 VLGLGLVYQF 92

## PDB1: 4ft6\_A

## PDB2: 5fvn\_A

## row number: 171

4ft6\_A 000 LENRALTGFFSATRG-GHSLGAGYQRMYGDDGMLYIAGTSTPLVNDIQVRNFTSAGERSWQLRYDYDFVALGIPGLTAMARYASGAHARTKA---MDDGR 096

5fvn\_A 000 NKAQNFEVVAQYQFDFGLRPSVAYLQSKGKDLE-------NG--------YGDQDLLKYVDVGATYYFN----KNMSTYVDYKINLLDDKEFTRNAGIST 081

4ft6\_A 097 AWERDVDVAYV 107

5fvn\_A 082 DDIVALGLVYQ 92

## PDB1: 4ft6\_A

## PDB2: 5nxr\_A

## row number: 172

4ft6\_A 000 EDASVSLGLRNLYFNRDFRQPGAAQSKQEEWAQGFLLQAKSGYTQGTLGLGVELIGQLGLKLDSSPDRAGSGLLPRHADGRAADDYARLGVA-PKLKL-S 098

5nxr\_A 000 NKLDVYGKVDVRHYFASADKGK-KSEDGDDSRVRLGVKGDTQITDQ-LTGFGRFEWET--KTN-K---------------AENEGENKNRLAYAGLKFAD 080

4ft6\_A 099 NTELKLGELLPE 110

5nxr\_A 081 FGSIDYGRNYGV 92

## PDB1: 4rjw\_A

## PDB2: 5dl6\_A

## row number: 173

4rjw\_A 000 DDSVWGLEGAWAMGPFSAQAEYLARKLKADDNA----------------YKDIKAKGYYAQLAYTLTGESRQYKLEGAKFDSVKPENKEIGAWEVFYRYD 084

5dl6\_A 000 DNDLYHAHFELKHQNHKFIFGTFQHHGDTAFPYLTGGETGLLIDTWPGEFLNPKEKAYSFRYEYDFKE--------------Y------VPGLCFMTRYT 080

4rjw\_A 085 NIKVEDDNVVADTATREVGDTKAKAHNLGVNWYVN----DAVKISAAYVKAKTDKITNNNGDDDGDGFVTRLQYVF 156

5dl6\_A 081 TGHNIYAPNL------GGTNLKERETDFDLGYTVQSGWLKNLGLRARYAIYDNNMLST-ANIKPVNETRINIDYTW 149