

fishu MAECGRRLGLSLEEARSRYESLQISDDVFGESGDD S-SENPFYSTGTGDSNSDNYPETNADARVNE

rat MAECGRKALSLEEARSRYESLQISDDVFGESGDD S-SDNPFYSTGSDSENYIAEVGEEEQQPKHHH

mouse MAEGGGGARRRAPALLEAARARYESLHISDDVFGESGPD G--GNPFYSTSAASRSSSAASDDDERER PAPPGTAPP-H

human MAEGGGGARRRAPALLEAARARYESLHISDDVFGESGPD S-GGNPFYSTSAASRSSSAASDDDEREP PGPPGAAPPPPR

zfinch MAEGGGGARRRAPALLEAARARYESLHISDDVFGESGPD S-GGNPFYSTSAASRSSSAASDDDEREP PGPPGAAPPPPR

Xenopus MMKGASLSGGSGGGGKRIALSLEEARSRYESLQISDDVFGESGDD SSSGNPFYSTSDSNTASCSGSEDEDDGGGRKTPHPLGQCEVGEIGL

coelac MAECGRKALSLEEARSRYESLQISDDVFGESGDD S-SGNPFYSTSGSGSSENYVSDSDGEE R-RAYGDQA

lampre MAATAALAPCAGEEERSVLISLLQAQCRYSLELNTISDDVFGESGDDATDGGSSAGNPFYSSSDSSSDRGGGGAARV AAARVAEAGGDEG

lancel MDDEEEQRRPAGLQHLRPPSPADHEGLQISDDMFGGASDDSA STGSEMSQ-SDD DDE

1v2

fishu TR-SQSCVPPGS VSSGQAQEEGWDTLRDL-SLPHY-QDTHGPTQKMSATATA

rat QKRGDKEIGQGW PGPSQKMPDTATA

mouse AADPLEEEDTGGGWSAVLRDR-PPPRF-EDTGGPTRKMPPSASA

human AADPLEEEDTGGGWSAVLRDR-PPPRF-EDTGGPTRKMPPSASA

zfinch AADPLEEEDTGGGWSAVLRDR-PPPRF-EDTGGPTRKMPPSASA

Xenopus APDAQEPEDEAGASAAALDR-PPPRF-EDTGGPTRKMPPSASA

coelac XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXCGPTRKMPPLTASA

lampre GPTRKMPPLTASA

lancel KNVGDGDLGNSTPHGTPRVKQKEVQRDCTERDVTGESLLHRER-TVTCCEEGDAEQVPIINLKEEGWSHTLQDR-AAPYF-SDTSGPTRNMPPPTSSV

coelac DDVGTAATG-METALGREEEEEGSGESGREL-GTPTF-NENPGSTRKMAATSSA

lampre EASEAHE-DAGLFFRNPLADEAERG-DDGERAECEGDDSCSLRDAAPFPF-TGSCGSLQDMPASAT

lancel DSEEMGD-ADDEGGGASADGGWTADITHF-DPCFCSDGETGVPLVPTDMRP

1v2 2v2b

fishu MDDFQLFVPDNLVNMVQTNMYAKKQERFSGDEGWTNVTLAEMKAPFLGYVSTSVSH CESVLISWSSGF-FSNRSIALKMSQARFEKILKYFHVV

rat LDFFQLFVPDNLVNMVQTNMYAKKQERFSGDEGWTNVTLAEMKAPFLGYVSTSVSH CESVLISWSSGF-FSNRSIALKMSQARFEKILKYFHVV

mouse VDDFQLFVPDNLVNMVQTNMYAKKQERFSGDGAWEVTLAEMKAPFLGYVSTSVSH CESVLISWSSGF-FSNRSIALVMSQARFEKILKYFHVV

human VDDFQLFVPDNLVNMVQTNMYAKKQERFSGDGAWEVTLAEMKAPFLGYVSTSVSH CESVLISWSSGF-FSNRSIALVMSQARFEKILKYFHVV

zfinch MDDFQLFVPDNLVNMVQTNMYAKKQERFSGDDTIDVTLTKAPFLGYMISTSIH CESVLISWSSGF-FSNRSIALIMTQSRFEKILKYFHVV

Xenopus MDDFQLFVPDNLVNMVQTNMYAKKQERFSGDDTIDVTLTKAPFLGYMISTSIH CESVLISWSSGF-FSNRSIALIMTQSRFEKILKYFHVV

coelac MDDFQLFVPDNLVNMVQTNMYAKKQERFSGDDTIDVTLTKAPFLGYMISTSIH CESVLISWSSGF-FSNRSIALIMTQSRFEKILKYFHVV

lampre IDFFQLFVPDNLVNMVQTNMYAKKQERFGNDGWDVTLTKAPFLGYMISTSIH CESVLISWSSGF-FSNRSIALIMTQSRFEKILKYFHVV

lancel IDFFQLFVPDNLVNMVQTNMYAKKQERFGNDGWDVTLTKAPFLGYMISTSIH CESVLISWSSGF-FSNRSIALIMTQSRFEKILKYFHVV

2v3 3v4

fishu AFRSSQSGSGGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFITTCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-PG

rat AFRSSQSGSNQGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFITTCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-QG

mouse AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

human AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

zfinch AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

Xenopus AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

coelac AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

lampre AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

lancel AFRSSQT-THGLYKIQPFLDSLQGSFSSSFRPSQTQVLHEPLIDEDPVFIATCTE RELRKRKRKRKFLSWVRQCSSTGFCIQIYVHLKEG-GG

4v5

fishu PDGLDTLKNKPQLHSLVAKQLCQNLA-GRNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

rat PDGLDALKNKPQLHSLVAKQLCQNLS-GKNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMIVCGSTPAQRGQSHVKMNGMSLI

mouse PDGLDALKNKPQLHSLVAKQLCQNLA-GKNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

human PDGLDALKNKPQLHSLVAKQLCQNLA-GKNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

zfinch PDGLDALKNKPQLHSLVAKQLCQNLA-GKNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

Xenopus PDGLDALKNKPQLHSLVAKQLCQNLA-GKNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

coelac PDGLDALKNKPQLHSLVAKQLCQNLS-GKNIIFTGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

lampre SDCLDAFRSLSQHLGVARRLCNDLTP-PSGVIFCGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

lancel SDCL-SSHEKGYSVARDLCSNDLTP-GRNHVIFCGPSITSLNLFEEFEKQGIYCCGLLS-TRKSDCTGLPQSMINTPAEQRGQSHVKMNGMSLI

5v6 6v7 6v7

fishu NWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

rat SWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

mouse CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

human CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

zfinch CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

Xenopus CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

coelac CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

lampre CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

lancel CWYNKGFRFLTNAYSPTKQGVIIKRRSG-EIPCLAVEAFAAHLISYICKYDDKYSKYFIFHKPNKTWQQVFWLTSIAINNAIYLYKMSDAYHVKR

Y5R9A QFGERLVKELLMDDCSPQT 518

Y5R9A QFGERLVRELLDDCSPQT 498

Y5R9A QFGERLVRELLGLEDSPAH 523

Y5R9A QFGERLVRELLGLEDSPAH 543

Y5R9A QFGERLVRELLGLEDSPTH 524

Y5R9A QFGERLVRELLGLEDSPTH 516

Y5R9A QFGERLVRELLGLEDSPTH 414

Y5R9A QFGERLVRELLGLEDSPTH 592

Y5R9A QFGERLVRELLGLEDSPTH 523

Y5R9A QFGERLVRELLGLEDSPTH 595

Y5R9A QFGERLVRELLGLEDSPTH 563