

HSG(Gymnocypris przewalskii)	1	MTDLHATMPKR EP AKLEER[5] AC- EC QNQNN-- CN -- I FLSLFI LSLSL HLVTLCYLDLSELKRE - I XQNK----- [1] EVsSTGPVPhyEA
SG(Ptychobarbus dipogon)	1	MTDLHATMPKR EP AKLEER[5] AC- EC QNQNN-- CN -- I FLSLFI LSLSL HLVTLCYLDLSELKRE - I SQNK----- [1] EVsSTXPVPhyEA
SG(Diptychus maculatus)	1	MTDLHAAMPKR EP AKLEER[5] AC- EC QNQNN-- CN -- I FLSLFI LSLSL HLVTLCYLDLSELKRE - I SQNK----- [1] EVsSTGPVPhyEA
PG(Schizothorax prenanti)	1	MTDLHAAMPKR EP AKLEER[5] AC- EC QSQNN-- CX -- I FLSLFI LSLSL HLVTLCYLDLSELKRE - I SQNK----- [1] EVsSTGPVPhyEA
Spinibarbus hollandi	1	MTDLHAAMPKR EP AKLEER[5] AC- EC QSQNN-- CX -- I FLSLFI LSLSL HLVTLCYLDLSELKRE - I SQNK----- [1] EVsSXGPVPhyEA
stickleback	1	MTRDGS P- AEDFA CK VM--- L PC- TC NKKCRS - RS G SV VFLGLFLLSLSL HAVTLVCYLDLSEVKRE - I I HQKR DTMITFAG DP- ADPA--- AV
medaka	1	MACDGS S- AEDFP DK VAFRAT PC- TC G ECKRG- QS- [1] SMVFLGFFLLSLCL HAVTLVCYLDLSEVKRE kVLHQRR ESMVTLTVS D--- PV--- GV
Danio rerio	1	MI DL HAAMEPKR EP AKLEER[5] AC- EC QSQNN-- CK -- I FLSLFI LSLSL HLVTLCYLDLSELKRE - I SQNK----- [1] EVsSTGPVPhyEA
Scleropages formosus	1	MASKGL S ENFAH/ EH KVLQCS [7] GC- MC R KQCSS - CR -- VFLGFFVL LSLSL HLVTLCYLDLSEVKRE - I AQNR EEPVWPA[4] E PI SPGAELRF V
Clupea harengus	1	MACES L V----- DK F MESAS [6] PC- TC K KRCNN-- CN -- VFLGFFI LSLAL HFI TSCFDLRLSEVKRE - I ALKKR EPASAVGCS [5] YH- TDDSEED---
Stegastes partitus	1	MACDGS S- AEDFP DK VMPGAA PC- TC S KRCRS - RS [6] SV VFLGLFLLSLSL HAVTLVCYLDLSEVKRE - I I HQKR DSMPLSGS DL- ADPVAa AV
Kryptolebias marmoratus	1	MACDGS S PAEDFP DK L MPRGA PC- MC N KRCRA S R S T SL VFLGLFLLSLSL HAVTLVCYLDLSEVKRE - I I HQKR DSVATLTGR E- ADPA--- AV
Cyprinodon variegatus	1	MACDDAS PAEDFP DT L MPRGA PC- MC G KRCRG- RS G SA VFLGLFLLSLTL HAVTL CYLDLSEVKRE - I THQKR ESI VTTSGV DL- AEPM--- GV
Nothobranchius furzeri	1	MACDG- S PAEDFS DK L MPRAA PC- MC N KRCRG- RS T SL VFLGLFLLSLTL HAVTLVCYLDLSEVKRE - I I HQKR DSMGLSGR DLI ADPA--- AV
Xiphophorus maculatus	1	MACDDAS PAEDFP DT VMPRGA PC- MC G KRCRG- RS G SA VFLGLFLLSLTL HAVTLVCYLDLSEVKRE - I THQKR DSKVTHAGV DL- DDPV--- GV
Oryzias latipes	1	MACDGS S- AEDFP DK VAFRAT PC- TC G ECKRG- QS- [1] SMVFLGFFLLSLCL HAVTLVCYLDLSEVKRE kVLHQRR ESMVTLTVS D--- PV--- GV
Oreochromis niloticus	1	MARDGS S- AEDFP DK VMPI AA PC- TC S KRCRS - RS- [1] SMVFLGLFLLSLTL HAVTLVCYLDLRSQKRE - I I HQKR DSMVTLACS DL- ADP--- AE

HSG(Gymnocypris przewalskii)	89	T--APVLR-LPD T-DHP T--- I BDQ----- X RWR DEH [4] ERV I HXTKRS ----- ETNGK - RK GDRKKGKGP--- PGAPGPPGPGQPPG PG PG P
SG(Ptychobarbus dipogon)	89	T--APVLR-LPD T-DHP T--- I BDQ----- X RWR DEH [4] ERV I HRTXRS ----- ETNGK - RK GDRKKGKGP--- PGAPGPPGPGQPPG PG PG P
SG(Diptychus maculatus)	89	T--APVLR-LPD T-DHP T--- I BDQ----- S RWR DEH [4] ERV I HRTKRS ----- ETNGK - RK GDRKKGKGP--- PGTPGPPGPGQPPG PG PG P
PG(Schizothorax prenanti)	89	T--APVLR-LPD T-DHP T--- I DDQ----- S RWR DEH [4] ERV I HRTKRS ----- ETNGK - KK ADRKKGKGP--- PGAPGPPGPGQPPG PG PG P
Spinibarbus hollandi	89	T--APVLR-LPD T-DHP T--- I X DQ----- S RWR DEH [4] ERV I HRTKRS ----- ETNGK - KK GERKKGKGP--- PGAPGPPGPGQPPG PG PG P
stickleback	86	L--APGQP-RPD SgVGR G GEG HE EK LLRNDEL HAT QDN RG TQRAKRS PGKQPET ELTGR E RR KKKKKGKRP V-- PGPPGPPGPGQPPG PG PG P
medaka	93	L--pPGGYQ-RQD---SR S GENR QER LQYRNDGF RST EDH RDI TQRVKRS SS KETEI ESTGK E KR KDKKKGKRI V-- PGPPGPPGPGQPPG PG PG P
Danio rerio	89	T--EPVLQ-SPD T-DHP T--- I GDQ----- S RWR DEH [4] DRV I HRTKRS ----- ETNGK - KK GERKKGKGP--- PGAPGPPGPGQPPG PG PG P
Scleropages formosus	103	V--EPSRR-TPE PqDRP S LQS I DDK-----T DLK DDS ERV I HRAKRS RT KPES ESNGK - KK - EKKKKGKQ--- PGAPGPPGPGQPPG PG PG P
Clupea harengus	93	I---PPEP-SPP E---- T PEG I S ER RVQ/TGS GST --- LWRTKRG TNRRHS ESSSG K RK DKKKGKRR ga PGPPGPPGPGQPPG PG PG P
Stegastes partitus	95	L-I SPGHP-RPD PgSSR S ADP QE EK LLHRKSDF HAT EDN RG TQRAKRS PGKQPET ESTGK E KR KDRKKGKRS V-- PGPPGPPGPGQPPG PG PG P
Kryptolebias marmoratus	87	LI aPGHP-RAD PqRSR G GEA HE ER LLYRNDGF HAT QDN RGR TR RAKRS PGKEPET ESNGK E KR KKKKKGKRP V-- PGPPGPPGPGQPPG PG PG P
Cyprinodon variegatus	84	L--PPGHP-QE P--RR T EED R E ER SAFRKEG HAT KDS RGR TR RAKRS PGKQPET ESNGK E KR KDKKKGKRP M-- PGPPGPPGPGQPPG PG PG P
Nothobranchius furzeri	86	L-sPGHP-RVD SgRSR G GEG HE ER LLYRNDGF HGT QJK RGR PQRAKRS PGREPET ESNGK E KR KDKKKGKRP V-- PGPPGPPGPGQPPG PG PG P
Xiphophorus maculatus	84	L--PPGHP-RMD TgSRH S EED R E ER FLYRNDGF HGT KDS RGR TR RAKRS PGRETET ESNGK E KR KKKKKGKRP --- GPPLGPPGPGQPPG PG PG P
Oryzias latipes	93	L--pPGGYQ-RQD---SR S GENR QER LQYRNDGF RST EDH RDI TQRVKRS SS KETEI ESTGK E KR KDKKKGKRI V-- PGPPGPPGPGQPPG PG PG P
Oreochromis niloticus	85	V-I SLGHP v RLD SgSSR G GES R E EK LLYRKADF HGT EDN RG TQRAKRS PGKEPET ESTGK E KR KEKKRAGRP V-- PGPPGPPGPGQPPG PG PG P

		Indel		19 (GXY) repeat
HSG(Gymnocypris przewalskii)	170	GNNAMPSGPPGP P [6] Q3PGS G-----G	KHRET-PPAWHLQ3QETTI Q/KEDLSEGMLKNWIM SI H Q RV Y KMSR X GELEVLDDGYFI YSQ/VEVYLN	
SG(Ptychobarbus dipogon)	170	GNNAMPSGPPGP X P [6] Q3PGP G-----G	KHRET-QPAWHLQ3QETTI Q/KEDLSEGMLKNWIM SI H Q RV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
SG(Diptychus maculatus)	170	GNNAMPSGPPGP P [6] Q3PGP G-----D IG	KHRET-QPAWHLQ3QETTI Q/KEDLSEGMLKNWIM SI H Q RV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
PG(Schizothorax prenanti)	170	GNNAMPSGPPGP P [6] Q3PGP PQ3PS GGAEGK	KHRET-QPAWHLQ3QETTI Q/KEDLSEGMLKNWIM SI H Q RV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
Spinibarbus hollandi	170	GNNAMPSGPPGP P [6] Q3PGP PQ3PS GGAEGK	NHRET-QPAWHLQ3QETPI Q/KEDLSEGMLKNWIM SI H X RV X KMSR X GELEVLDDGYFI YSQ/VEVYLN	
stickleback	183	GNNVGPAGPPGP P Q3PPG TP3PA GVPDKT	KTKEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI H HRV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
medaka	182	GNNVGPAGPPGP P Q3PPG SQ3PA GVSCKT	KTKEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI H HRV F KMSR T GQLEVLDDGYFI YSQ/VEVYLN	
Danio rerio	170	GNNAMPSGPPGP P [6] Q3PPG PQ3PS GG-EKG	KHREA-QPAWHLQ3QETTI Q/KEDLSEGMLKNWIM SI H Q RV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
Scleropages formosus	190	GNNAMPSGPPGP P [6] Q3PPG PQ3PA G3MDKT	RGREI-QPAWHLQ3QETTI Q/KEDLSEGMLKNWIM SI H H KV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
Clupea harengus	181	GNNVGPAGPPGP P K3PPG PQ3PA GAVDKS	KI KEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI SVH HKV F KMSR S GELEVLDDGYFI YSQ/VEVYLN	
Stegastes partitus	197	GNNVGPAGPPGP P Q3PPG AQ3PA GVADRT	KTKEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI H HRV F KMSR T GQLEVLDDGYFI YSQ/VEVYLN	
Kryptolebias marmoratus	191	GNNVGPAGPPGP P Q3PPG AQ3PA GVPD--	IKTNF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI N K DV F RMNPR T GELVLLDDGYFI YSQ/VEVYLN	
Cyprinodon variegatus	185	GNNVGPAGPPGP P Q3PPG AQ3PA GVPD--	ISKRF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI N K DV F RMNPR T GELVLLDDGYFI YSQ/VEVYLN	
Nothobranchius furzeri	188	GNNVGPAGPPGP P Q3PPG TQ3PA GVPD--	KTKEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI N K DV F RMNPR T GELVLLDDGYFI YSQ/VEVYLN	
Xiphophorus maculatus	185	GNNVGPAGPPGP P Q3PPG PQ3PA GVS-D	ISKKF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI N K DV F RMNPR T GELVLLDDGYFI YSQ/VEVYLN	
Oryzias latipes	182	GNNVGPAGPPGP P Q3PPG SQ3PA GVSCKT	KTKEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI H HRV F KMSR T GQLEVLDDGYFI YSQ/VEVYLN	
Oreochromis niloticus	187	GNNVGPAGPPGP P Q3PPG AQ3PA GVPCKG	KTKEF-QPAWHLQ3QETTI Q/REDLSQGLRNKMWI SI H HRV F KMSR T GQLEVLDDGYFI YSQ/VEVYLN	

HSG(Gymnocypris przewalskii)	273	TDI ASYEVMDKTPFLRCTRSI ETGQRKFNTCY T AGVCL LRA R QRI SI RMWYEDT S I S M S N H T T FLGCI RLQDAPAA GH T-
SG(Ptychobarbus dipogon)	273	TDI ASYEVMDKTPFLRCTRSI ETGQRKFNTCY T AGVCL LRA X QRI SI RMWYEDT X I S M S N H T X FLGS I RLQDAPAA X H T-
SG(Diptychus maculatus)	275	TDI ASYEI MDKTPFLRCTRSI ETGQRKFNTCY T AGVCL LRA R QRI SI RMWYEDT S I S M S N H T T FLGX I RLQDAPAA GH T-
PG(Schizothorax prenanti)	281	TDI ASYEVMDKTPFLRCTRSI ETGQRKFNTCY T AGVCL LRA R QRI SI RMWYEDT S I S M S N H T T FLGS I RLQDAPAA GH T-
Spinibarbus hollandi	281	TDI ASYEVMDKTPFLRCTRSI ETGQRKFNTCY X AGVCL LRA R QRI SI RMWYEDT S I S M S N H T T FLGX I RLQDAPAA GH X-
stickleback	288	TDI ASYEVMDSNPFLRCTSI ETGQRKFNTCY T AGV S L LRA G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA GQN-
medaka	287	TDI ASYDMMDSPFLRCTSI ETGQRKFNTCY T AGV S P LRA G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA G---
Danio rerio	280	TDI ASYEVMDKTPFLRCTRSI ETGQRKFNTCY T AGVCL LRA R QRI SI RMWYEDT S I S M S N H T T FLGS I RLQDAPSA GH T-
Scleropages formosus	302	TDI ASYEVMDKTPFLRCTRSI ETGQRKFNTCY T AGVCL LRA R QRI SI KMWYEDT S I S M T N H T T FLGS I RLGEAPPA GH S-
Clupea harengus	286	TDI ASYEVLDRTPLFRLCTSI ETGQRKFNTCY T AGV S L LRA R QRI SI RMWYEDT L I S M T D H T T FLGS VRLGQ PPA GQA-
Stegastes partitus	302	TDI ASYDMMDSNPFLRCTSI ETGQRKFNTCY T AGV S P LRA G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA GQNg
Kryptolebias marmoratus	294	TDI ASYDMMDSPFLRCTSI ETGQRKFNTCY T AGV S L LRS G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA GQNg
Cyprinodon variegatus	288	TDI ASYDMMDSPFLRCTSI ETGQRKFNTCY T AGV S Q LRS G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA GQNg
Nothobranchius furzeri	291	TDI ASYDMMDSNPFLRCTSI ETGQRKFNTCY T AGV S L LRS G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA GQNg
Xiphophorus maculatus	288	TDI ASYDMMDSPFLRCTSI ETGQRKFNTCY T AGV S L LRS G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA GQNg
Oryzias latipes	287	TDI ASYDMMDSPFLRCTSI ETGQRKFNTCY T AGV S P LRA G QKI SI RI AHEYT L I NVTN H T T FLGS VRLGEAPSA G---
Oreochromis niloticus	292	TDI ASYDMMDSPFLRCTSI ETGQRKFNTCY T AGV S P LRA G QKI Y I RI AHEYT L I NVTN H T T LGS VRLGEAPSA GQNg