

Feral pig-2	GIHGFFLIEK	CFILLVSPSA	EK-----	-----	-----	-----S	PEDSQAAEIP	RGS----MTA	PNRKCKTISL	LAIMILVGD
Cow	GIHGFFLIEK	CFILLVSPGA	KK-----	-----	-----	-----G	PEDAQAAEIP	IPS----VNT	PNRKCKTISL	LAIMILVGD
Horse-1	GIHGFFLIEK	CFILLVSPGA	KQGVSLVNGH	VGHSHHLALN	SELSDQSGRG	KSASTLPLKG	PEDSQAPEIH	IGS----MTA	SNRKCKTISL	LAVMILVGD
Horse-2	GIHGFFLIEK	CFILLVSPGA	KK-----	-----	-----	-----G	PEDSQAPEIH	IGS----MTA	SNRKCKTISL	LAVMILVGD
Dog-1	GIHGFFLIEK	CFILLVSPNA	EG-VSLVNGH	GGHSHHLVLN	SELSDQSGRG	KSASTLQLKS	PEDSQAAEIP	GGG----MTA	SNRKCKTISL	LAIMILVGD
Dog-2	GIHGFFLIEK	CFILLVSPNA	E-----	-----	-----	-----KS	PEDSQAAEIP	GGG----MTA	SNRKCKTISL	LAIMILVGD
Elephant-1	GIHGFFLIEK	CFILLVSPNA	KQDASLVNGH	VGHSHHFALD	SELSDQSGGG	QSTSTIQLKS	PEDSQAAEIP	IRR----KTA	FNRKCKTMSL	LAIMILVGD
Elephant-2	GIHGFFLIEK	CFILLVSPNA	K-----	-----	-----	-----KS	PEDSQAAEIP	IRR----KTA	FNRKCKTMSL	LAIMILVGD
Opossum	GIHGFFLIEK	CFILLFSPNA	KK-----	-----	-----	-----G	PEDSDTAIEP	IDS----LAA	SNRKRKAISL	LAIMILVGD
Platypus	GIHGFFLIEK	CFVLLMPESD	KR-----	-----	-----	-----S	PEDSEPVVRS	ADS----LTA	SKGKRKAIGR	LAIMVLLGD
Chicken	GIHGFFLIEK	CFVLLVTPRE	QR-----	-----	-----	-----S	PEDSESAEVP	PGN----KV	ISTKNKRISL	LAIMVLVGD
Anole lizard	GIYGFLLIEK	GFVLFMPSPHE	HV-----	-----	-----	-----S	LAILMNTNIS	EAHYLSLFNK	LSFRCQGI	LAIMILVGD
Xenopus frog	GIYGFLLIEK	LFFFLLVSSPK	QG-LSLMNGH	LTHSHDLPLD	AHLGDQSRKA	KSSSTIQLRS	PDDCEHSEVP	ETLP--VRPK	ARRKSKGISL	LAIMILVGD
Tilapia	GIYSFFLIEK	LFSFLVPSHS	HG-----	---HGGDLS	LNCNGHSQRG	KSISTIQLGF	VDDLECTEMS	PEHAN--TRR	PSPHRQGVSL	LAVMIVVGD
Consensus	**::***:**	* :::	.						: ::	**:*::**.

	610	620	630	640	650	660	670	680	690	700
Human-1	LHNFADGLAI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLM	KTAIMNMFIS	SLTAFMGLYI	GLSVSADPCV	QDWIFVTAG	MFLYLSLVM
Human-2	LHNFADGLAI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLM	KTAIMNMFIS	SLTAFMGLYI	GLSVSADPCV	QDWIFVTAG	MFLYLSLVM
Chimpanzee-1	LHNFADGLAI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLM	KTAIMNMFIS	SLTAFMGLYI	GLSVSADPCV	QDWIFVTAG	MFLYLSLVM
Chimpanzee-2	LHNFADGLAI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLM	KTAIMNMFIS	SLTAFMGLYI	GLSVSADPCV	QDWIFVTAG	MFLYLSLVM
Rhesus monkey	LHNFADGLAI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLM	KTAIMNMFIS	SLTAFMGLYI	GLSVSADPCV	QDWIFVTAG	MFLYLSLVM
Galango-1	LHNFADGLVI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLV	KTAIMNMFIS	ALTAFIGLYI	GLSVSADPGV	QDWIFVTAG	MFLYLSLVM
Galango-2	LHNFADGLVI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLV	KTAIMNMFIS	ALTAFIGLYI	GLSVSADPGV	QDWIFVTAG	MFLYLSLVM
Rabbit-1	LHNFADGLVI	GAAFSSSSC	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPV	KTAIMNMFIS	ALTAFIGLYI	GLSVSADPCV	QDWILTBTAG	MFLYLSLVM
Rabbit-2	LHNFADGLVI	GAAFSSSSC	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPV	KTAIMNMFIS	ALTAFIGLYI	GLSVSADPCV	QDWILTBTAG	MFLYLSLVM
Guinea pig-1	LHNFADGLV	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLV	KTAIMNMFIS	ALTAFIGLYI	GLSVSADPCV	QDWILTBTAG	MFLYLSLVM
Guinea pig-2	LHNFADGLV	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLV	KTAIMNMFIS	ALTAFIGLYI	GLSVSADPCV	QDWILTBTAG	MFLYLSLVM
Mouse	LHNFADGLVI	GTAFFSSSLES	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLV	RTAIMNMFIS	ALTAFIGLYI	GLSVSADPCV	QDWILTBTAG	MFLYLSLVM
Rat	LHNFADGLVI	GTAFFSSSLES	GVTITIAILC	HEIPHEMGDF	AVLLSSGSLI	RTAIMNMFIS	ALTAFIGLYI	GLSVSADPCV	QDWILTBTAG	MFLYLSLVM
Feral pig-1	LHNFADGLVI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPI	KIAILVNFIS	ALTAFIGLYI	GLAVSTDPIC	QNWILTBTAG	MFLYLSLVM
Feral pig-2	LHNFADGLVI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPI	KIAILVNFIS	ALTAFIGLYI	GLAVSTDPIC	QNWILTBTAG	MFLYLSLVM
Cow	LHNFADGLVI	GAAFSSSSEA	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPV	KIAILVNFIS	ALTAFIGLYI	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Horse-1	LHNFADGLVI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPV	KIAILVNFIS	ALTAFIGLYI	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Horse-2	LHNFADGLVI	GAAFSSSSS	GVTITIAILC	HEIPHEMGDF	AVLLSSGLPV	KIAILVNFIS	ALTAFIGLYI	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Dog-1	LHNFADGLVI	GAAFSSSSS	GATTTLAALC	HEIPHEMGDF	AVLLSSGLPI	KIAILVNFIS	ALTAFIGLYV	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Dog-2	LHNFADGLVI	GAAFSSSSS	GATTTLAALC	HEIPHEMGDF	AVLLSSGLPI	KIAILVNFIS	ALTAFIGLYV	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Elephant-1	LHNFADGLVI	GAAFSSSSS	GITTTIAILC	HEIPHEMGDF	AVLLSSGLSV	KIAILVNFMS	ALTAFIGLYI	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Elephant-2	LHNFADGLVI	GAAFSSSSS	GITTTIAILC	HEIPHEMGDF	AVLLSSGLSV	KIAILVNFMS	ALTAFIGLYI	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Opossum	LHNFADGLVI	GAAFSSSSTES	GVTITIAILC	HEIPHEMGDF	AVLLSSGLAI	KTAIMNMFIS	ALTAFIGLYI	GLSVSTDPIC	QNWILTBTAG	MFLYLSLVM
Platypus	LHNFADGLVI	GAAFSSSSTET	GVTITIAILC	HEIPHEMGDF	AVLLSTGLMT	KTAVLINFLS	ALPAFLGLYV	GLAISADPGV	QNWIFSBTAG	MFLYLSLVM
Chicken	LHNFADGLVI	GAAFSSSSTET	GVTITIAILC	HEIPHEMGDF	AVLLSTGLPT	KIAILVNFMS	ALPAFLGLYI	GLSVSTDPIC	QNWIFSBTAG	MFLYLSLVM
Anole lizard	LHNFADGLVI	GAAFSSSSTEM	GATTTLAALC	HEIPHEMGDF	AVLLSTGLSS	KIAILVNFIS	ALTAFIGLYI	GLSISTDPIC	QNWIFSBTAG	MFLYLSLVM
Xenopus frog	LHNFADGMVI	GSAAFSSSSTET	GIATVAILC	HEIPHEMGDF	AVLLNTGLSA	KIAFLMNFIS	ALTAFIGLYI	GLSLSANPDV	QIWIFAVTAG	MFLYLSLVM
Tilapia	LHNFADGLVI	GAAFSSSSSET	GMATTVAALC	HEIPHEMGDF	AVLLSSGSLV	KTAVLINFLS	ALPAFLGLYI	GLFVSSBTEV	QWIFVBTAG	MFLYLSLVM
Consensus	*****:.	*:**.* *	* :::****	*****	*****	*****:	: :::***:	.*.* **:	** :::. :	* **::*** : ***** *

	710	720	730	740
Human-1	LPETHVQQTQ	RPWMMFLLQN	FGLILGWLSL	LLLAIYEQNI KI
Human-2	LPETHVQQTQ	RPWMMFLLQN	FGLILGWLSL	LLLAIYEQNI KI
Chimpanzee-1	LPETHVQQTQ	RPWMMFLLQN	FGLILGWLSL	LLLAIYEQNI KI
Chimpanzee-2	LPETHVQQTQ	RPWMMFLLQN	FGLILGWLSL	LLLAIYEQNI KI
Rhesus monkey	LPETHVQQTQ	RPWMMFLLQN	FGLILGWLSL	LLLAIYEQNI KI
Galango-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Galango-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Rabbit-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Rabbit-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Guinea pig-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Guinea pig-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Mouse	LPETHVQQTQ	RPWMMFLLQN	VGLVLGWFSL	LLLAVYEQNI KI
Rat	LPETHVQQTQ	RPWMMFLLQN	VGLVLGWFSL	LLLAVYEQNI KI
Feral pig-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Feral pig-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Cow	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Horse-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Horse-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Dog-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Dog-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Elephant-1	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Elephant-2	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Opossum	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Platypus	LPETHVQQTQ	RPWMMFLLQN	FGLTLGWLSL	LLLAIYEQNI KI
Chicken	LPETHVQQTQ	RPWMMFLLQN	LGLLLGWLCL	LLLAIYEQKI KI
Anole lizard	LPETHVQQTQ	RPWMMFLLQN	LGLLLGWLCL	LLLAIYEPKI KI
Xenopus frog	LPETHVQQTQ	RPWMMFLLQN	LGLLLGWLCL	LLLAIYEHKI QF
Tilapia	LPETHVQQTQ	RPWMMFLLQN	LGLLLGWAACL	LLLALFEHEL KF
Consensus	**** ::::	** :*:**	.* ** ** *	***:** : :