

>Gorilla Gorilla

MSRLLWRKVAGATVGPGRVPAPGRWVSSSVPASDPSDEVLSSEGGQLRHNPLDIQMLSRG  
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LAEGTCPTLAVAI SPSAWYSWCSQRLVEERYSWTSQLSPADLIPLEVPAGASSPTQRDWQ  
EQLVVGHNVSFDRAHIREQYLIQGSRMRF LDTMSMHMAI SGLSSFQ RSLWIAAKQGKHKV  
QPPTKQGQKSQRKAGRGP AISSWDWLDISSVNSLAEVHRLYVGGPPLEKEPRELFVKGT  
MDIRENFQDLMQYCAQDVWATHEVFQQQLPLFLERC PHPVTLAGMLEMVSYLPVNQNW  
E RYLAEAQGTYEELQREMKKSLMDLANDACQLLSGERYKEDPWLWDLEWDLQEFKQKAKK  
VKKEPATASKLPIEGAGAPGDPMDQEDLGPRSEEEEFQ QDVMARACLQKLKGTTELLPKR  
PQHLPGHGPGWYRKLCPRLDDPAWTPGPSLLSLQMRVTPKLMALTWDGFP LHYSERHGWGY  
LVPGRRDNVAKLPTGTTLESAGVVC PYRAIESLYRKHCLEQGKQQLMPQEAGLAEFFLLT  
DNSAIWQTVEELDYLEVEAEAKMDNLRAAVPGQPLALTARGGPKDTQPSYHHGNGPYNDV  
DIPGCWFFKLP HKDGN SCNVGSPFAKDFLPK MEDGTLQAGPGGASGPRALEINKMISFWR  
NAHKRISSQMVVWLPR SALPRAVIRHPDYDEEGLYGAILPQVV TAGTITRRAVEPTWLT  
ASNARPDRVGSELKAMVQAPPGYTLVGADVDSQELWIAAVLGDAHFAGMHGCTAFGWMTLQ  
GRKSRGTDLHSKTATTVGISREHAKIFNYGRIYGAGQPFAERLLMQFNHRLTQQEAAEKA  
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VVAERAWKGGTESEMFNKLES IATSDI P RTPVLGCRISRAL EPSAVQEEFMTSRVNWVQ  
SSAVDYLHMLLVAMKWLFEFFAIDGRFCISIHDEVRYLVREEDRYRAALALQITNLLTRC  
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I IELTKGSLEKRSQPGP

>Homo Sapiens

MSRLLWRKVAGATVGP GPVPAPGRWVSSSVPASDPSDGQRRRQQQQQQQQQQQQQQPQQPQ  
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PDVELRLPPLYGDNLDQHFRLLAQKQSLPYLEAANLLLQAQLPPKPPAWAWAEGWTRYGP  
EGEAVPVAIPEERALVFDVEVC LAEGTCPTLAVAI SPSAWYSWCSQRLVEERYSWTSQLS  
PADLIPLEVPTGASSPTQRDWQEQLVVGHNVSFDRAHIREQYLIQGSRMRF LDTMSMHMA  
I SGLSSFQ RSLWIAAKQGKHKVQPPTKQGQKSQRKARRGPAISSWDWLDISSVNSLAEVH  
RLYVGGPPLEKEPRELFVKGTMKDIRENFQDLMQYCAQDVWATHEVFQQQLPLFLERC PH  
PVTLAGMLEMVSYLPVNQNWERYLAEAQGTYEELQREMKKSLMDLANDACQLLSGERYK  
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KLMALTWDGFP LHYSERHGWGYLVPGRRDNLAKLPTGTTLESAGVVC PYRAIESLYRKHC  
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ARGGPKDTQPSYHHGNGPYNDVDI PGCWFFKLP HKDGN SCNVGSPFAKDFLPK MEDGTLQ  
AGPGGASGPRALEINKMISFWRNAHKRISSQMVVWLPR SALPRAVIRHPDYDEEGLYGAI  
LPQVV TAGTITRRAVEPTWLTASNARPDRVGSELKAMVQAPPGYTLVGADVDSQELWIAA  
VLGDAHFAGMHGCTAFGWMTLQGRKSRGTDLHSKTATTVGISREHAKIFNYGRIYGAGQP  
FAERLLMQFNHRLTQQEAAEKAQQMYAATKGLRWYRLSDEGEWLVRELNLVDRTEGGWI  
SLQDLRKVQRETARKSQWKKWEVVAERAWKGGTESEMFNKLES IATSDI P RTPVLGCCIS  
RAL EPSAVQEEFMTSRVNWVQSSAVDYLHMLLVAMKWLFEFFAIDGRFCISIHDEVRYL  
VREEDRYRAALALQITNLLTRCMFAYKLG LNDLPQSVAFFSAVDIDRCLRKEVTMDCKTP  
SNPTGMERRYGIPQGEALDIYQI IELTKGSLEKRSQPGP

>Dog

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DVELRLPPLYGGSLDQHFRLLAQKQSLPYLEAANLLRAQPPPRPLSWAWVEGWTRYGPA  
GEAVPVAIPEERALVFDVEVC LAEGTCPTLAVAI SPSAWYSWCSRRLVEERYSWTSQLS  
PADLIPLEVPASAGGPTQRDWQEQLVVGHNVCFDRAHIREQYLIQGSRMRF LDTMSMHMAI  
SGLSGFQ RSLWMAAKQGKR KARHPTQRGQKSQNKASGPVISSWDWLDISSVNNLADVHSL



YVGGPPLEKEPREL FVKGSMKDIRENFQALMQYCAQDVWATYEI FQQQLPLFLERC PHPV  
TLAGMLEMGVSYLPVNQNWERYLAEAQNTYEELQWEMKKS LMDLANDACQLLSGERYKED  
PWLWDLEWDLQEFKQKAKKVKRKEPTAASKLPIERAGDPKDQEDPGPPSEEEVQRDVT  
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LTAAGGPRASQPAYHHGNGPYNDVDI PGCWFFKLP HKDGS GCNVGSPFAKDFLPK MEDGT  
LQAGPGGASGPRALEINKMISFWRNAHKRISSQM VVWLPR SALPRAVTRHPDYDEEGRYG  
AILPQVV TAGTITRRAVEPTWLTASNARPD RVGSELKAMVQAPPGYV FVGADVDSQELWI  
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WVSLQDLRKIQREASRKS RWKKWEVAAERAWRGGTESEM FNKLES IAMS DTPCTPVLGCR  
ISRALEPSAVKGEFMTSRVNWV VQSSAVDYLHLMLVAMKWL FEEFAIDGRFCISIHDEVR  
YLVREEDRYRAALALQITNLLTRCMFAYKLG LNDLPQSVAFFSTVDIDQCLRKEVTMDCK  
TPSNPTGMERRYGI PQGEALDIYQI IELTKGSLEQ

>Mouse

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MLSRGLHEQIFGCGGEMPDEAAVQRSVEHLQKHGLWGQPATPLPDVELRLPRLFGGNLDQ  
HFRLLAQKQSLPYLEAAASLLEAQLPPEPKSWAWAEGWTRYGPEGEAEVVAIPEERALVF  
DVEVCLAEGTCPTLAVAI SPSAWYSWCSRRLVEERYSWTSQ LSPADLIPLGGSTSASSST  
KQDQGEQLVVGHNVSFDRAHIREQYLIQDSRMRFLDTMSMHMAISGLSSFQ RSLWMGAKQ  
GKHKTTQQSTKRGQKSPRKANGPAISSWDWMDISSANNLADVHNLYVGGPPLEKEPREL FV  
KGSMDIRENFQDLMQYCARDVWATFEVFQQQLPLFLERC PHPVTLAGMLEMGVSYLPVN  
QNWERYL TEAQNTYEELQREM KKS LMDLANDACQLLSGERYKEDPWLWDLEWDLQEFKQK  
KAKKVKK PASASKLPIEGAGPFGDPMQEDPGPPSEEEELQ RSVTAHNRLQQLRSTTDL L  
PKRPQHLPGHPGWYRKLCPRLDDPAWAPGPSLLSLQMRVTPKLMAL TWDFPLHYSDSHG  
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SNARPD RVGSELKAMVQAPPGYV LVGADVDSQELWIAAVLGDAHFAGMHGCTAFGWMTLQ  
GRKSRGTDLH SKTAATVGI SREHAKIFNYGRIYGAGQSFAERLLMQFNHRLTRQEAAEKA  
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VASERAWTGGTESEM FNKLES IAMS DTPRTPVLGCCISRALEPSVVQGEFITSRVNWV VQ  
SSAVDYLHLMLVAMKWL FEEFAIDGRFCISIHDEVR YLVREEDRYRAALALQITNLLTRC  
MFAYKLG LNDLPQSVAFFSAVDIDQCLRKEVTMDCKTPSNPTGMERRYGI PQGEALDIYQ  
I IELTKGSLEKRSQPGP

>Bonobo

MSRLLWRKVAGATVGPVPAPGRWVSSSVPASDPSDGQRRRQQQQQQQPQQPQVLSSEGGQLRHNPLD  
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GSRMRFLDTMSMHMAISGLSSFQ RSLWIAAKQ GKHKVQPPTKQGQKSQRKARRGPAISSWDWLDISSVNS  
LAEVHRLYVGGPPLEKEPREL FVKGTMKDIRENFQDLMQYCAQDVWATHEVFQQQLPLFLERC PHPVTLA  
GMLEMGVSYLPVNQNWERYLAEAQGTYEELQREM KKS LMDLANDACQLLSGERYKDDPWLWDLEWDLQEF  
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TGTTLESAGVVCPYRAIESLYRKHCLEQGKQQLMPQEAGLAEFFLLTDNSAIWQTV EELDYLEVEAEAKM  
ENLRAAVPGQPLALTARGGPKDTQPSYHHGNGPYNDVDI PGCWFFKLP HKDGN SCNVGSPFAKDFLPKME  
DGT LQAGPGGASGPRALEINKMISFWRNAHKRI RYRLSDEGEWL VRELNLPVDRTEGGWISLQDLR KVQR  
ETARKSQWKKWEVVAERAWKGGTESEM FNKLES IATS DIPRTPVLGCCISRALEPSAVQEEFMTSRVNWV



VQSSAVDYLHMLVAMKWLFEFFAIDGRFCISIHDEVRYLVREEDRYRAALALQITNLLTRCMFAYKLG  
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>African Elephant

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QRLVEERYSWTSQLSPADLIPLEIPANAGSPTQRDWQEQLVVGHNVCFDRAHIREQYLIQGSRMRFDTM  
SMHMAISGLSGFQRSWLMAAKQGKRKARHLTQKQNSQNKGRGPAIASWDWLGISVNNLADVHSLYVGG  
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LCPRLDDPAWTPGPSLLSLQMRVTPKLMALTWDGFPLHYSEQHGWGYLVPGRRDNLAKVPVGTALASAGV  
ACPYRAIESLYRKHCLEQGKQQPEPQEAGLAEFLTDNSTMWETVEELGCLELEAEAKMENCQAAVPGQ  
PSVLTAPSTVSQPTFHHGNGPYNDVDVPGCWFFKLPKHDGNSCNVGS PFAKDFLPMMEDGTLQAGPGGAS  
GPRALEINKMISFWRNAHKRISSQM VVWLPR SALPRAVTRHPDYDEEGHYGAILPQVV TAGTITRAVEP  
TWLTASNARPD RVGSELKAMVQAPPGYVLVGADVDSQELWIAAVLGD AHFAGMHGCTAFGWMTLQGRKSR  
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TDEGEWLVRELDLPVDRTE DGVVSLQDLRKIQREASRKSRRKKWEVVAERAWTGGTESEM FNKLES IATS  
DTPRTPVLGCRISR ALEPSAVQGEFMTSRVNWVQSSAVDYLHMLVAMKWLFEFFGIDGRFCISIHDEV  
RYLVREEDRYRAALALQVTNLLT

>Anole Lizard

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LFVKGSMTDIRNNFQDLMRYCAFV DLATHEVCQEQLPLFLERC PHPVTFAGMLEMGVSYLPVNQNWERYL  
EEAQLTFEELQKEMKKS LMNADGACQLLHGDRYKDDPWLWDLEWDLQEFKQKQKKNWRKKDQGNHE  
DFPKVVEKASTMECQEDPGPPTEEEEQGIPESRSLNRLKETVALQPKRIQHLPGHPGWYRKLCPRLDAP  
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EHCKERGKEEPISLDT SLEEEHMLTESSTIWQKVEELSRMEMEMDVPMSNQLRQDEMGFAQSHPEYHHG  
NGPYNEVNI PGCWFFRLPHKDGSDNNVGS PFAKDFLSK MEDGTLKAGIGATDGTQALEINKKISFWRNAH  
KRISFQM VVWLKKGELPRSVTRHPDYDEESRYGAILPQVITAGTVTRRAVEPTWLTASNARADRVGSELK  
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ENGSVSLQDVRKIHREVGKRSQKKKWDVVRQRVWSNGTESEM FNKLES IAMSDSPCTPVLGCRISR ALEP  
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>Alpaca

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LHSKTAATVGISREHAKVFNYGRIYGAGQPFAERLLMQFNHRLTRQEAAEKAQQOMYAVTKGLRRYRLSDD  
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RTPVLGCRISRALPSAVQGEFMTSRVNWVVQSSAVDYHLMLVAMKWLFEFFAIDGRFCISIHDEVRYL  
VREEDRYRAALALQITNLLTRCMFAYKLGNDLPQSVAFFSAVDIDQCLRKEVTMDCKTPSNPTGMERRY  
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>Marmoset

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LESIATSDIPCTPVLGCRISRALPSVQGEFMTSRVNWVVQSSAVDYHLMLVAMKWLFEFFAIDGRFC  
ISIHDEVRYLVREEDRYRAALALQITNLLTRCMFAYKLGNDLPQSVAFFSAVDIDRCLRKEVTMDCKTP  
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>Medaka

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GVSYPVNQNWERYLVEAQGTYEELQREMKKS LMDLANDACQLLSGERYKEDPWLWDLEWDLQEFKQKKA  
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>Hedgehog

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SEEPRLPDAPGEKGRERRAEQRAPRGPAPVPAAPRRPPPAGEVPAAELVSESHHPSRARRTGQVHEALWC  
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LTYISSVDLALQAAVGPASSLVQTWVFMSQLNRAAEVPSCAAGGSQPGDWSRGTERRADGKLWL PARRTA  
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PGL



>Gorilla Gorilla

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>Homo Sapiens

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>Dog

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GEAVPVAIPEERALVFDVEVC LAEGTCPTLAVAI SPSAWYSWCSRRLVEERYSWTSQLS  
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