

# Supplementary Figure 1

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Mus_musculus      MAVMKNYLLPILVFLFLAYYYSTNEEFPEMLQGGKVVIVTGASKGIGREMYHLSKMGAH
Rattus_norvegicus ---MKKYLLPVLVLCGLY-YYSTNEEFPEMLQGGKVVIVTGASKGIGREMYHLSKMGAH
Bos_taurus        MAFMKKYLLPILGIFLFLAYYYYSANEFFPEMLRGGKRVIVTGASKGIGREMYHLARMGAH
Canis_lupus_familiaris MAFMKKYLLPILGIFLFLAYYYYSANEFFPEMLQGGKVVIVTGASKGIGREMYHLARMGAH
Homo_sapiens      MAFMKKYLLPILGIFLFLAYYYYSANEFFPEMLQGGKVVIVTGASKGIGREMYHLARMGAH
Macaca_mulatta    MAFMKKYLLPILGIFLFLAYYYYSANEFFPEMLQGGKVVIVTGASKGIGREMYHLARMGAH
Xenopus_(Silurana)_tropicalis -MALLKALVWFTGIFLAVYFYFYSAGDVFPEMLRGGKRVIVTGASSGIGREMYHLARMGSH
Gallus_gallus     MGLFLKVLIPLLGLGLAVYFYFSGGNFSEEMLRGGKRVIVTGASSGIGREMYHLARMGAH
Callorhinchus_milli MGFVKMMLIFLLGIALAYFFNSGDSDFPEMLRGGKRVIVTGASSGIGREMYHLARMGSH
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Mus_musculus      VVLTARSEEGLQKVVSRCLELGAASAHYIAGTMEDMTFAEQFVAKGKIMGGDLMLILNH
Rattus_norvegicus VVLTARSEEGLQKVVSRCLELGAASAHYIAGTMEDMAFAERFVVEGKLLGGDLMLILNH
Bos_taurus        VVVTARSEESLKKVVSRCLELGAASAHYVAGTMENMTFAEQFVAKGKIMGGDLMLILNH
Canis_lupus_familiaris VVVTARSKETLKKVVSRCLELGAASAHYIPGTMEDMTFAEQFVAKGKIMGGDLMLILNH
Homo_sapiens      VVVTARSKETLQKVVSRHCLLELGAASAHYIAGTMEDMTFAEQFVAKGKIMGGDLMLILNH
Macaca_mulatta    VVVTARSKETLQKVVSRHCLLELGAASAHYIAGTMEDMTFAEQFVAKGKIMGGDLMLILNH
Xenopus_(Silurana)_tropicalis ILITARTEELKQKVVQAQCTHLGAASAHYIAGSMOTMTFAKLVVHKGLENLFGGLDMLILNH
Gallus_gallus     VVLTARTEAKLQKVVSKCLDLGAASARVYVSGSMESTAFEEVVKERENINGGLDMLILNH
Callorhinchus_milli ILITARRKQRLNAVVAKCLKLGASADYVAGSMEDMEFAKHVVKEAEKQFGGLDMLILNH
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Mus_musculus      ITQTSLSLFDHDDIHSVRRVMEVNFSLSYVWSTAALPMLKQSNNGSIIVVSSLAGKMTQPMI
Rattus_norvegicus ITQTTMSLFDHDDIHSVRRSMEVNFSLSYVWLSTAALPMLKQSNNGSIIVVSSLAGKMTQPLI
Bos_taurus        IHYTLPGVFSNDIHLRLRTLEVNLLSYVWLSTAALPMLKQTNNGSIIVVSSIAGKINACPLV
Canis_lupus_familiaris ITNTSMNLFSGDIHLVRRSMEVNFSLSYVWLSAALPMLKQSNNGSIIVVSSKAGKMSPLV
Homo_sapiens      ITNTSMLNLFHDDIHHVRRSMEVNFSLSYVWLVAAALPMLKQSNNGSIIVVSSLAGKWAYPMV
Macaca_mulatta    ITNTSMLNLFHDDIHHVRRSMEVNFSLSYVWLVAAALPMLKQSNNGSIIVVSSLAGKWAYPMV
Xenopus_(Silurana)_tropicalis IGHTYFGYFDGNIHVRDLLEINVLSYATMTVAALPMLKQSNNGSIIVVSSVAGELKLSFL
Gallus_gallus     IGRSFFDFGNGVDVHVRKIMETNFLSYVAMTTSALPMLKESEGNIVVSSVSGKVASPFV
Callorhinchus_milli IGSAYFRYFDGVDVHIRTLLLEINFLSYVMTVEAMPMLKQSNNGSIIVVSSIAGKIGNPLV
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Mus_musculus      APYSASKFALDGGFFSTIRTELYITKVVNSITLCVLGLIDTETAMKEISGIINA-QASPKE
Rattus_norvegicus ASYSASKFALDGGFFSTIRKEHLMTKVVNSITLCVLGFIDTETALKETSGIILS-QAAPKE
Bos_taurus        AAYSASKFALDGGFFSSLRMEYEATKVVNSITLCILGLIDTETAMKAVAGIFNA-KASPKE
Canis_lupus_familiaris APYSASKFALDGGFFSSVRMEHVSITKVVNSITLCILGLINTDTAMKAVSGIILSTVGAASSE
Homo_sapiens      AAYSASKFALDGGFFSSIRKEYSVSRVNSITLCVLGLIDTETAMKAVSGIVHM-QAAPKE
Macaca_mulatta    AAYSASKFALDGGFFSSIRKEYSVAKVNSITLCVLGLIDTETAMKAVSGIINM-QAAPKE
Xenopus_(Silurana)_tropicalis KFLFLGILLIMY-LFRGLINRF----YD-----VHHPCLTDSALKTVSVIQQ-PAAPKE
Gallus_gallus     APYSATKFALEGGFFSSLRHEFTIEKVVNSITLCILGYINTENAVQVSHIIE-APAPKE
Callorhinchus_milli VPYSSTKFALEDGGFFSSLRQEFAMLNYSITLCVSIYINTEAAVGAISHIQQ-PPAPKD
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Mus_musculus      ECALEIIKGTALRKSEVYYDKSPLT-PILLGNPGRKIMEFFSLRYNKMDFVSN-----
Rattus_norvegicus ECALEIIKGTVLRKDEYYDKSSWT-PILLGNPGRRIMEFSLRSYNRDLFVSN-----
Bos_taurus        ECALEIIKGGTLRQDEYYDSSILT-PILLRNPGRKIMEFFFLKRYMERFINN-----
Canis_lupus_familiaris ECALEIIKGGALRQEEVYYDNSVNT-AFLGNPGRKILEFSLRSYKLDKFINN-----
Homo_sapiens      ECALEIIKGGALRQEEVYYDSSLNT-TILLRNPCRKILEFLYSTSYNMDRFINK-----
Macaca_mulatta    ECALEIIKGGALRQEEVYYDSSLNT-TLLMRNPCRKILEFLYLPSYNMDFRTKN-----
Xenopus_(Silurana)_tropicalis ECALEIIKGGALRKRVEYYQYHATKIPLLRLDWAPELLQSLLLKYNMDFQRKEV----
Gallus_gallus     ECALEIIRSGALRQRELHYPASTVPTLLLRDLAPEFLDGLIRNMRVENIKRPPPAQGS
Callorhinchus_milli ECALEIIKGGALRNRVEYYKYEFKVVYLLLRDWPPELLDAFIRKYNLNDIPQNVPHL--
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