CLUSTAL FORMAT: MUSCLE (3.7) multiple sequence alignment

Caenorhabd ------------------------------------------------------------

Arabidopsi -------------------------------------------MEIATDTAKQMRDEELF

Drosophila MANSSRSRAILSVNLDAVMANDPLRELFEACKTGEIAKVKKLITPQTVNARDTAGRKSTP

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd -------MNGDTEVLTHNLLKPAVVVDSFNLHAVISATQHGHVESVEAAL---KQGLSPN

Arabidopsi KAAEWGDSSLFMSLSEEQLSKSLNFRNEDGRSLLHVAASFGHSQIVKLLSSSDEAKTVIN

Drosophila LHFAAGYGRREVVEFLLNSGASIQACDEGGLHPLHNCCSFGHAEVVRLLL---KAGASPN

Danio\_reri --------------------------MMNVEDELTTAAATGNISHVQFLL---SNGVNAN

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------MEPAAGSSMEPSADWLATAAARGRVEEVRALL---EAGALPN

Pan\_troglo ------------------MEPAAGSSMEPSADWLATAAARGRVEEVRALL---EAGALPN

Mus\_muscul --------------------------MESAADRLARAAAQGRVHDVRALL---EAGVSPN

Rattus\_nor --------------------------MESSADRLARAAALGREHEVRALL---EAGASPN

Caenorhabd TTDDDGCSLLH-------------------------------------------------

Arabidopsi SKDDEGWAPLHS------------------------------------------------

Drosophila TTDNWNYTPLHEAASKGKVDVCLALLQHGANHTIRNSEQKTPLELADEATRPVLTGEYRK

Danio\_reri VVNKFRRTPIQ-------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie APNSYGRRPIQ-------------------------------------------------

Pan\_troglo APNSYGRRPIQ-------------------------------------------------

Mus\_muscul APNSFGRTPIQ-------------------------------------------------

Rattus\_nor APNTFGRTPIQ-------------------------------------------------

Caenorhabd -------------------------------------------------WAAINN-----

Arabidopsi -------------------------------------------------AASIGN-----

Drosophila DELLEAARSGAEDRLLALLTPLNVNCHASDGRRSTPLHLAAGYNRIGIVEILLANGADVH

Danio\_reri -------------------------------------------------VMMMGN-----

Bos\_taurus --------------------------------------------------MMMGS-----

Homo\_sapie -------------------------------------------------VMMMGS-----

Pan\_troglo -------------------------------------------------VMMMGS-----

Mus\_muscul -------------------------------------------------VMMMGN-----

Rattus\_nor -------------------------------------------------VMMMGN-----

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Caenorhabd --------------------------------------------------RLEVARLLIS

Arabidopsi ---------------------------------------------------AELVEVLLT

Drosophila AKDKGGLVPLHNACSYGHFDVTKLLIQAGANVNANDLWAFTPLHEAASKSRVEVCSLLLS

Danio\_reri ---------------------------------------------------APLALVLLE

Bos\_taurus ---------------------------------------------------ARVAELLLL

Homo\_sapie ---------------------------------------------------ARVAELLLL

Pan\_troglo ---------------------------------------------------ARVAELLLL

Mus\_muscul ---------------------------------------------------VHVAALLLN

Rattus\_nor ---------------------------------------------------VKVAALLLS

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Caenorhabd YNADAN-----------------------------------------------LIG----

Arabidopsi RGADVN-----------------------------------------------AKN----

Drosophila RGADPTLLNCHSKSAIDAAPTRELRERIAFEYKGHCLLDACRKCDVSRAKKLVCAEIVNF

Danio\_reri QGADPN-----------------------------------------------VPD----

Bos\_taurus HGADPN-----------------------------------------------CAD----

Homo\_sapie HGAEPN-----------------------------------------------CAD----

Pan\_troglo HGAEPN-----------------------------------------------CAD----

Mus\_muscul YGADSN-----------------------------------------------CED----

Rattus\_nor YGADSN-----------------------------------------------CED----

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Caenorhabd --GVLASSPIH-------------------------------------------------

Arabidopsi ---NGGRTALH-------------------------------------------------

Drosophila VHPYTGDTPLHLAVVSPDGKRKQLMELLTRKGSLLNEKNKAFLTPLHLAAELLHYDAMEV

Danio\_reri --PDTGSTPLH-------------------------------------------------

Bos\_taurus --PATLTRPVH-------------------------------------------------

Homo\_sapie --PATLTRPVH-------------------------------------------------

Pan\_troglo --PATLTRPVH-------------------------------------------------

Mus\_muscul --PTTFSRPVH-------------------------------------------------

Rattus\_nor --PTTLSRPVH-------------------------------------------------

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Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila LLKQGAKVNALDSLGQTPLHRCARDEQAVRLLLSYAADTNIVSLEGLTAAQLASDSVLKL

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ------------WAARNGLVAMCA------------------------------------

Arabidopsi ------------YAASKGRLEIAQ------------------------------------

Drosophila LKNPPDSETHLLEAAKAGDLDTVRRIVLNNPISVNCRDLDGRHSTPLHFAAGFNRVPVVQ

Danio\_reri ------------DAARTGFIDTVR------------------------------------

Bos\_taurus ------------DAAREGFLDTLV------------------------------------

Homo\_sapie ------------DAAREGFLDTLV------------------------------------

Pan\_troglo ------------DAAREGFLDTLV------------------------------------

Mus\_muscul ------------DAAREGFLDTLV------------------------------------

Rattus\_nor ------------DAAREGFLDTLV------------------------------------

\*\* \* :

Caenorhabd ---------------------------------VLVKGGAVCNVRDIQGYTPIHLAIQGN

Arabidopsi ---------------------------------LLLTHGAKINITDKVGCTPLHRAASVG

Drosophila FLLEHGAEVYAADKGGLVPLHNACSYGHYEVTELLVKHGANVNVSDLWKFTPLHEAAAKG

Danio\_reri ---------------------------------LLIRFGADPNTKDHCDLRPVDVAQQTG

Bos\_taurus ---------------------------------ALHRAGARLDVRDAWGRLPVDLAEERG

Homo\_sapie ---------------------------------VLHRAGARLDVRDAWGRLPVDLAEELG

Pan\_troglo ---------------------------------VLHRAGARLDVRDAWGRLPVDLAEELG

Mus\_muscul ---------------------------------VLHGSGARLDVRDAWGRLPLDLAQERG

Rattus\_nor ---------------------------------VLHQAGARLDVRDAWGRLPLDLALERG

\* \*\* : \* \*: \* .

Caenorhabd HVPLVAYFLLKFEYAKDISDNSGMTPAMMCAKRSFTMFPL--------------------

Arabidopsi KLEVCEF-LIEEGAEIDATDKMGQTALMHSVICDDKQVAF--------------------

Drosophila KYDICKL-LLKHGADPMKKNRDGATPADLVKESDHDVAELLRGPSALLDAAKKGNLARVQ

Danio\_reri NVDVVEL-LNRV------------------------------------------------

Bos\_taurus HRDVARY-LRAA------------------------------------------------

Homo\_sapie HRDVARY-LRAA------------------------------------------------

Pan\_troglo HRDVARY-LRAA------------------------------------------------

Mus\_muscul HQDIVRY-LRSAGCSLCSAGWSLCTAGNVAQ-TD--------------------------

Rattus\_nor HHDVVRY-LRYL----------LSSAGNVSRVTD--------------------------

: : \*

Caenorhabd ---------------------------------RLIVRAGADLSL---------KEHFS-

Arabidopsi ----------------------------------LLIRHGADVDVEDKEGYTVLGRATN-

Drosophila RLVTPESINCRDAQGRNSTPLHLAAGYNNFECAEYLLENGADVNAQDKGGLIPLHNASSY

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------AEDTE-

Homo\_sapie ------------------------------------------------------AGGTR-

Pan\_troglo ------------------------------------------------------AGGTR-

Mus\_muscul ------------------------------------------------------GHSFS-

Rattus\_nor ------------------------------------------------------RHNFC-

Caenorhabd ----------------------GNTALHLAAQDRNSSAVM--------------------

Arabidopsi ----------------------EFRPALIDAAKAMLEG----------------------

Drosophila GHLDIAALLIKHKTVVNATDKWGFTPLHEAAQKGRTQLCSLLLAHGADAYMKNQEGQTPI

Danio\_reri ------------------------------------------------------------

Bos\_taurus ----------------------GGSHASADSAEGPADSSDLKKD----------------

Homo\_sapie ----------------------GSNHARIDAAEGPSDIPD--------------------

Pan\_troglo ----------------------GSNHARIDAAEGPLDIPD--------------------

Mus\_muscul ----------------------SSTPRALELRGQSQEQS---------------------

Rattus\_nor ----------------------SSTPRCLGLRGQPPKQR---------------------

Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila ELATADDVKCLLQDAMATSLSQQALSASTQSLTSSSPAPDATAAAAPGTSSSSSSAILSP

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila TTETVLLPTGASMILSVPVPLPLSSSTRISPAQGAEANGAEGSSSDDLLPDADTITNVSG

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila FLSSQQLHHLIELFEREQITLDILAEMGHDDLKQVGVSAYGFRHKILKGIAQLRSTTGIG

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila NNVNLCTLLVDLLPDDKEFVAVEEEMQATIREHRDNGQAGGYFTRYNIIRVQKVQNRKLW

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila ERYAHRRQEIAEENFLQSNERMLFHGSPFINAIVQRGFDERHAYIGGMFGAGIYFAEHSS

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ------------------------------------------------------------

Arabidopsi ------------------------------------------------------------

Drosophila KSNQYVYGIGGGIGCPSHKDKSCYVCPRQLLLCRVALGKSFLQYSAMKMAHAPPGHHSVV

Danio\_reri ------------------------------------------------------------

Bos\_taurus ------------------------------------------------------------

Homo\_sapie ------------------------------------------------------------

Pan\_troglo ------------------------------------------------------------

Mus\_muscul ------------------------------------------------------------

Rattus\_nor ------------------------------------------------------------

Caenorhabd ---------------------------------------------

Arabidopsi ---------------------------------------------

Drosophila GRPSAGGLHFAEYVVYRGEQSYPEYLITYQIVKPDDSSSGTEDTR

Danio\_reri ---------------------------------------------

Bos\_taurus ---------------------------------------------

Homo\_sapie ---------------------------------------------

Pan\_troglo ---------------------------------------------

Mus\_muscul ---------------------------------------------

Rattus\_nor ---------------------------------------------