Additional file 7. Alignment of NCX proteins

The file presents the alignment of all NCX proteins that were utilized as markers or identified in this work (excluding CrNCX). See the legends of Additional file 5 for details of sequence alignment and color annotation.

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H.sapiens_NCX1.1      ...................................................MYNMRRLSLSPTFSMGFHL
P.troglodytes_NCX1.1  ...................................................MYNMRRLSLSPTFSMGFHL
C.familiaris_NCX1.1   ......................................................MLQLRLLPTFSMGCHL
F.catus_NCX1.1        ......................................................MLRLRLSPTFSVGFHL
C.porcellus_NCX1.1    ......................................................MLRLSLSPTYSLGFHL
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R.norvegicus_NCX1.1   ......................................................MLRLSLPPNVSMGFRL
M.musculus_NCX1.1     ......................................................MLRLSLPPNVSMGFRL
M.mulatta_NCX1.3      ......................................................MRRLSLSPTFSMGFHL
O.cuniculus_NCX1.2    ......................................................MPRFSLSPPFSMGFHL
S.tropicalis_NCX1     ......................................................MMKLGTSLAFFARFHF
O.mossambicus_NCX1.1  ...............................................MSPVRTVPMFFTYKLIFFATVIS
O.mykiss_NCX1         ..............................................MRRTGTSSFLFCALQLTVLLAVFS
D.rerio_NCX1a         ..............................................MGQSGTSSYFSLALNLSIFLLVFS
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R.norvegicus_NCX3.3   ....................................................MAWLRLQPLTSAFLHFGL
M.musculus_NCX3.1     ....................................................MAWLRLQPLTSAFLHFGL
G.gallus_NCX3         ....................................................MAWLSLQPLTSAFLHFGL
D.rerio_NCX4a         ....................................................MFHLRLSRFSFSSITPCL
T.nigroviridis_NCX4a  ................................................................MPHTLI
H.sapiens_NCX2.1      .........................................................MAPLALVGVTLLL
R.norvegicus_NCX2.1   .........................................................MAPLALVGVALLL
M.musculus_NCX2.1     .........................................................MAPLALMGVVLLL
S.kowalevskii_3       ...................................MMKLLCSILSRTLSELTTVSRGVGASALLLVVAFL
T.adhaerens_2         .....................................MQLFSALLWVIAVVVLNFKVDPTLGSSIISERD
L.opalescens_NCX      MNPFKISFSWGVPLFLLGLFFDFAHASEDSNDTCTTEAET..............................
A.mellifera_NCX       ......................................................................
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C.briggsae_NCX2       ......................................................................
T.spiralis            ......................................................................
M.brevicollis_1       ......................................................MRPQTWPAWAVLAMLV
Salpingoeca           ...............................................................MVRGLSL
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S.kowalevskii_2       ......................................................................
T.adhaerens_1         ......................................................................
D.pulex_1             ......................................................................
P.humanus_corporis    ......................................................................
O.dioica              ......................................................................
A.pisum               ......................................................................
P.marinus             ..............................................................MIGLSLWG
A.anophagefferens_1   ......................................................................
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N.vectensis_2         ......................................................................
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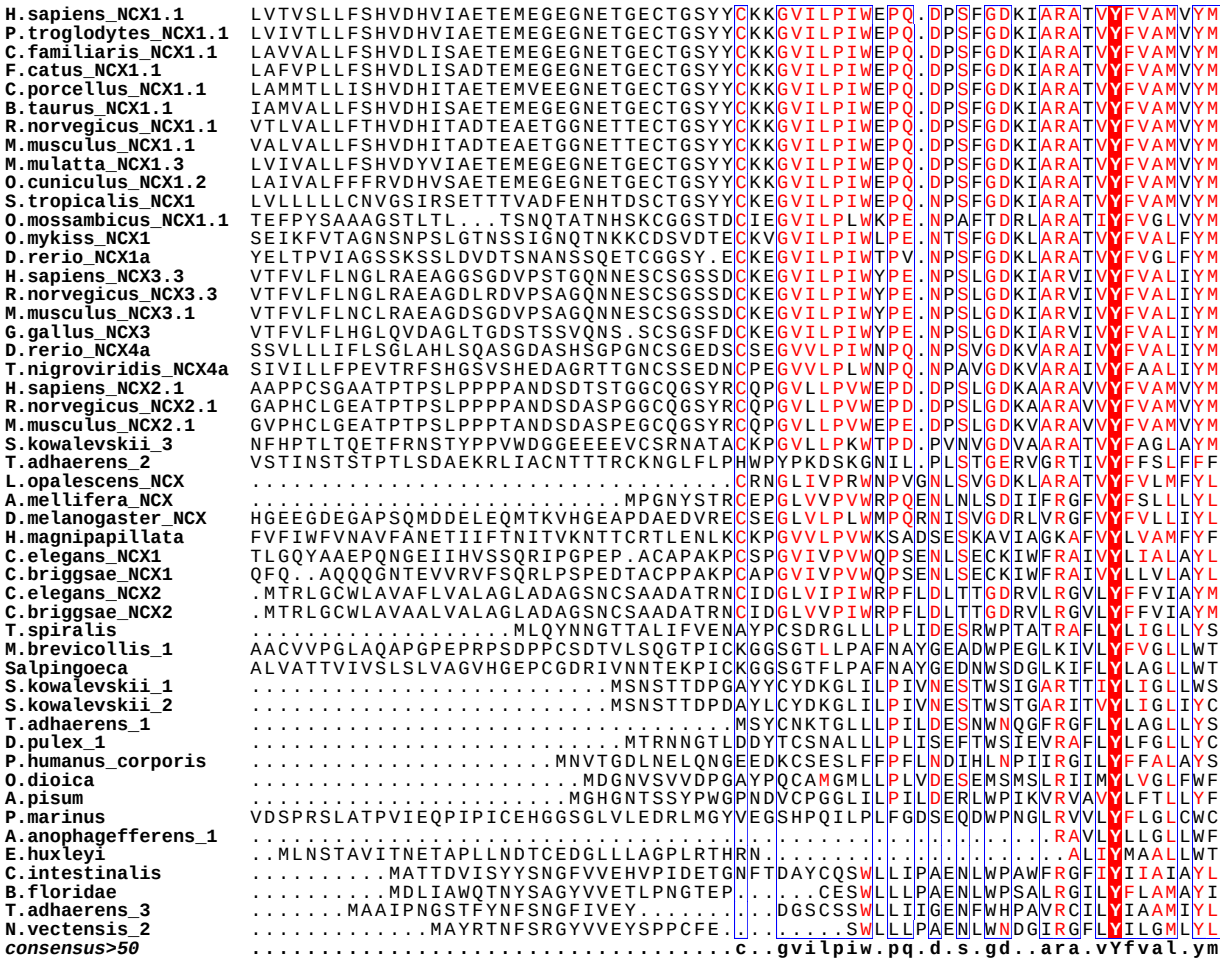
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O.cuniculus_NCX1.2 LAIVALFFFRVDHVSAETEMEGEGNETGECTGSYYCKKGVILPIWEPQ.DPSFGDKIARATVYFVAMVYM
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O.mossambicus_NCX1.1 TEFPYSAAAGSTLTL...TSNQTATNHSKCGGSTDCIEGVILPLWKPE.NPAFTDRLARATIYFVGLVYM
O.mykiss_NCX1 SEIKFVTAGNSNPSLGTNSSIGNQTNKKCDSVDTECKVGVILPIWLPE.NTSFGDKLARATVYFVALFYM
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T.adhaerens_2 VSTINSTSTPTLSDAEKRLIACNTTTRCKNGLFLPHWPYPKDSKGNIL.PLSTGERVGRTIVYFFSLFFF
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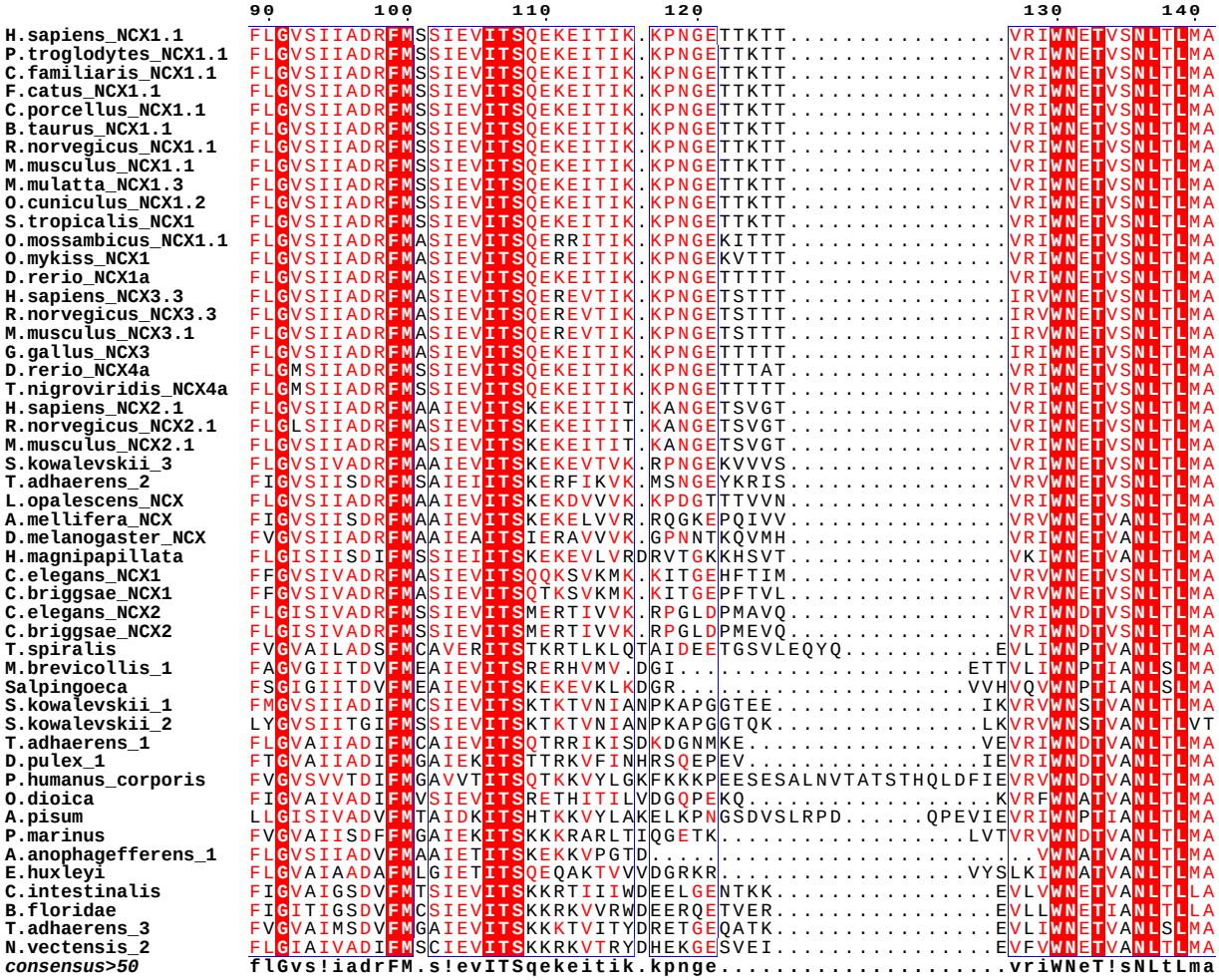
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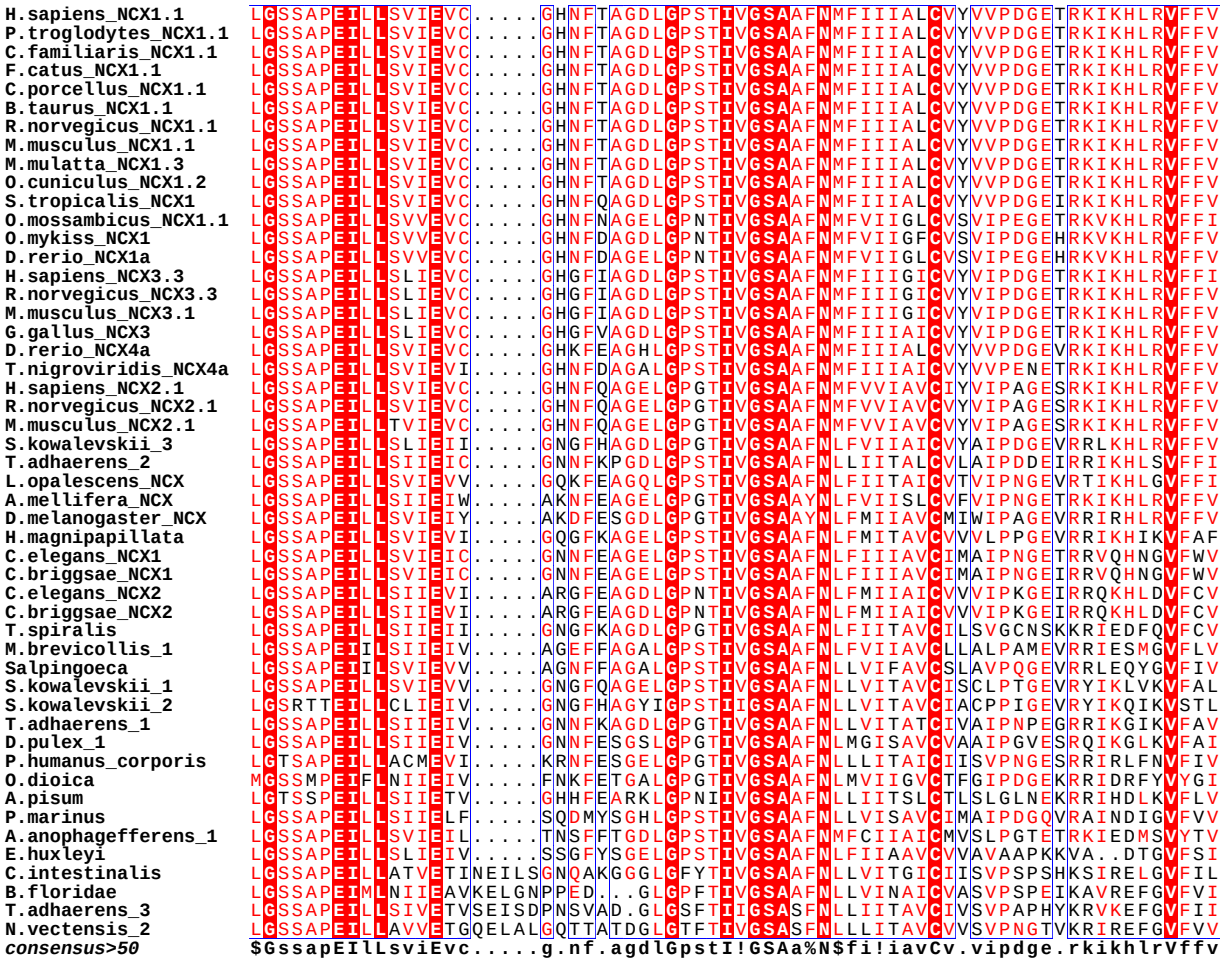
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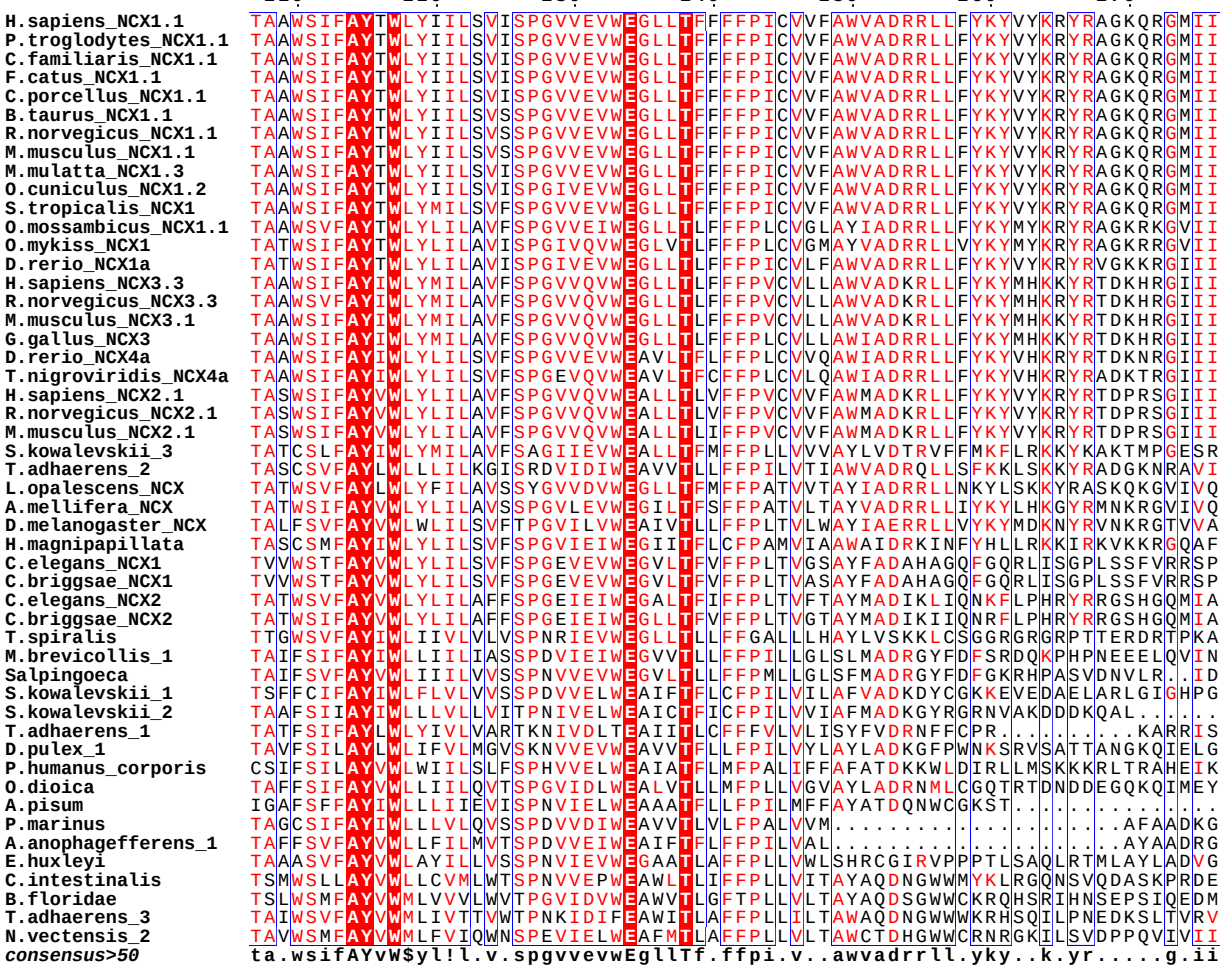
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F.catus_NCX1.1            EHEGDRPS.S
C.porcellus_NCX1.1        EHEGDRPS.S
B.taurus_NCX1.1           EHEGDRPS.S
R.norvegicus_NCX1.1       EHEGDRPA.S
M.musculus_NCX1.1         EHEGDRPA.S
M.mulatta_NCX1.3          EHEGDRPS.S
O.cuniculus_NCX1.2        EHEGDRPS.S
S.tropicalis_NCX1         ETEGDRPS.S
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R.norvegicus_NCX3.3       ETEGEHPKG
M.musculus_NCX3.1         ETEGDHPKG
G.gallus_NCX3             ESEGDHPKG
D.rerio_NCX4a             ETEGDGMFT
T.nigroviridis_NCX4a      ESEGDAMFT
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P.humanus_corporis        MEE..
O.dioica                  NPD..
A.pisum                   .....
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A.anophagefferens_1       YFD..
E.huxleyi                 AFS..
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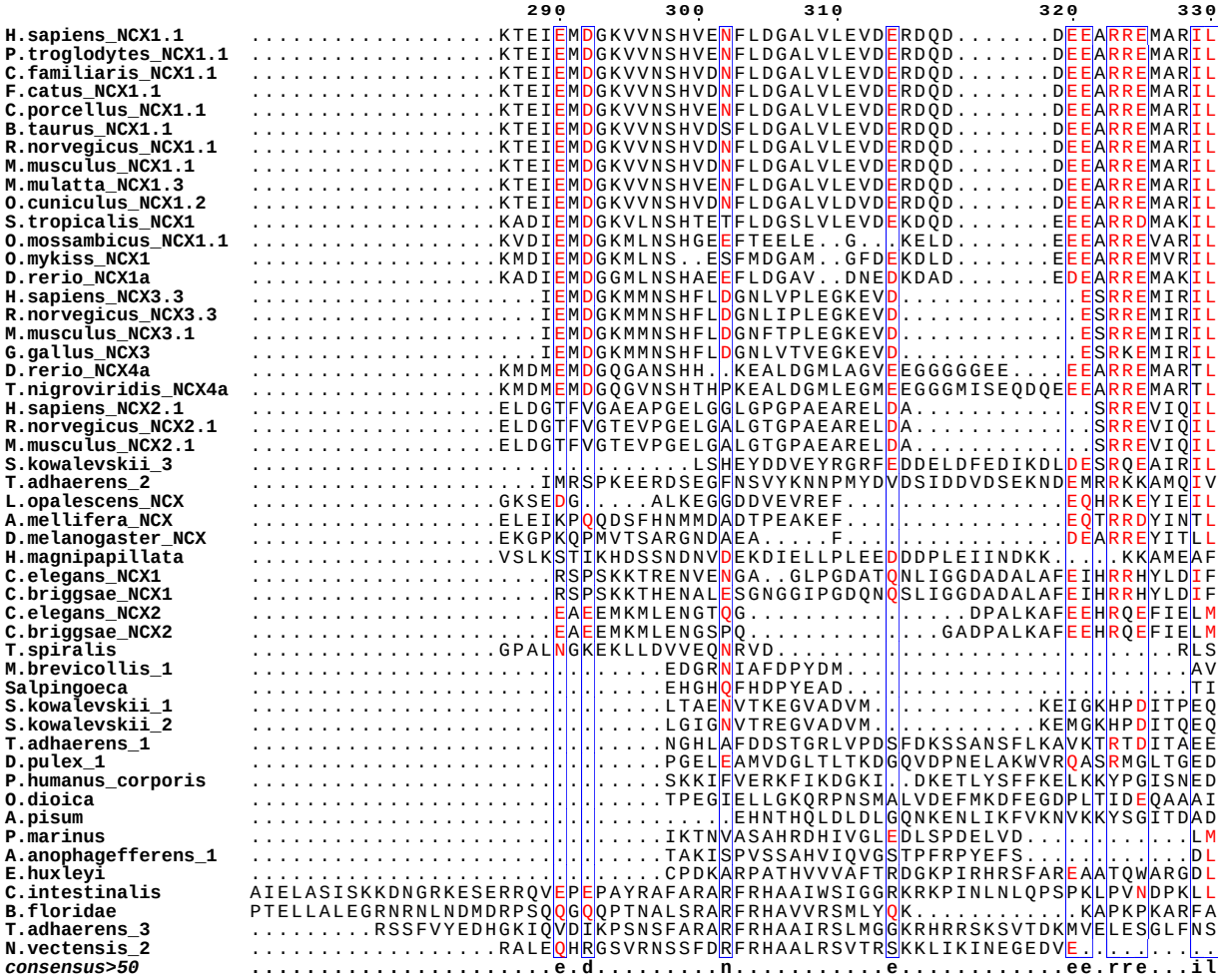
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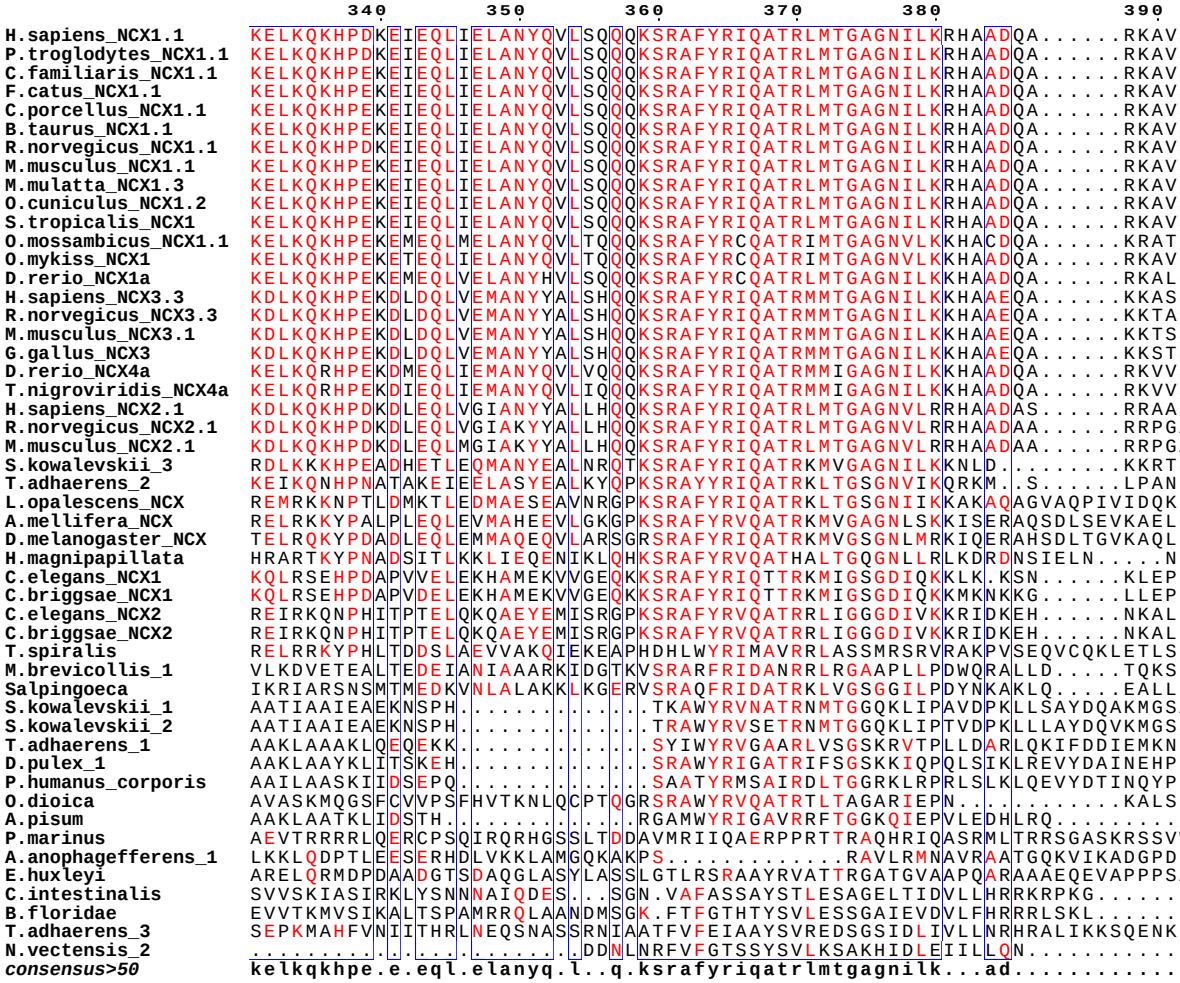
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C.familiaris_NCX1.1 KELKQKHPEKEIEQLIELANYQVLSQQQKSRAFYRIQATRLMTGAGNILKRHAADQA.....RKAVSMH
F.catus_NCX1.1 KELKQKHPEKEIEQLIELANYQVLSQQQKSRAFYRIQATRLMTGAGNILKRHAADQA.....RKAVSMH
C.porcellus_NCX1.1 KELKQKHPEKEIEQLIELANYQVLSQQQKSRAFYRIQATRLMTGAGNILKRHAADQA.....RKAVSMH
B.taurus_NCX1.1 KELKQKHPEKEIEQLIELANYQVLSQQQKSRAFYRIQATRLMTGAGNILKRHAADQA.....RKAVSMH
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O.mossambicus_NCX1.1 KELKQKHPEKEMEQLMELANYQVLTQQQKSRAFYRCQATRIMTGAGNVLKKHACDQA.....KRAT..H
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D.rerio_NCX1a KELKQKHPEKEMEQLVELANYHVLSQQQKSRAFYRCQATRLMTGAGNILKKHAADQA.....RKALGIH
H.sapiens_NCX3.3 KDLKQKHPEKDLDQLVEMANYYALSHQQKSRAFYRIQATRMMTGAGNILKKHAAEQA.....KKASSMS
R.norvegicus_NCX3.3 KDLKQKHPEKDLDQLVEMANYYALSHQQKSRAFYRIQATRMMTGAGNILKKHAAEQA.....KKTASMS
M.musculus_NCX3.1 KDLKQKHPEKDLDQLVEMANYYALSHQQKSRAFYRIQATRMMTGAGNILKKHAAEQA.....KKTSSMS
G.gallus_NCX3 KDLKQKHPEKDLDQLVEMANYYALSHQQKSRAFYRIQATRMMTGAGNILKKHAAEQA.....KKSTSLH
D.rerio_NCX4a KELKQRHPEKDMEQLIEMANYQVLVQQQKSRAFYRIQATRMMIGAGNILKKHAADQA.....RKVVSCH
T.nigroviridis_NCX4a KELKQRHPEKDIEQLIEMANYQVLIQQQKSRAFYRIQATRMMIGAGNILKKHAADQA.....RKVVSCH
H.sapiens_NCX2.1 KDLKQKHPDKDLEQLVGIANYYALLHQQKSRAFYRIQATRLMTGAGNVLRRHAADAS.....RRAAPAE
R.norvegicus_NCX2.1 KDLKQKHPDKDLEQLVGIAKYYALLHQQKSRAFYRIQATRLMTGAGNVLRRHAADAA.....RRPGAND
M.musculus_NCX2.1 KDLKQKHPDKDLEQLMGIAKYYALLHQQKSRAFYRIQATRLMTGAGNVLRRHAADAA.....RRPGATD
S.kowalevskii_3 RDLKKKHPEADHETLEQMANYEALNRQTKSRAFYRIQATRKMVGAGNILKKNLD.........KKRTSIA
T.adhaerens_2 KEIKQNHPNATAKEIEELASYEALKYQPKSRAYYRIQATRKLTGSGNVIKQRKM..S.....LPANPDG
L.opalescens_NCX REMRKKNPTLDMKTLEDMAESEAVNRGPKSRAFYRIQATRKLTGSGNIIKKAKAQAGVAQPIVIDQKPED
A.mellifera_NCX RELRKKYPALPLEQLEVMAHEEVLGKGPKSRAFYRVQATRKMVGAGNLSKKISERAQSDLSEVKAELQKQ
D.melanogaster_NCX TELRQKYPDADLEQLEMMAQEQVLARSGRSRAFYRIQATRKMVGSGNLMRKIQERAHSDLTGVKAQLHAG
H.magnipapillata HRARTKYPNADSITLKKLIEQENIKLQHKSRAFYRVQATHALTGQGNLLRLKDRDNSIELN.....NKME
C.elegans_NCX1 KQLRSEHPDAPVVELEKHAMEKVVGEQKKSRAFYRIQTTRKMIGSGDIQKKLK.KSN......KLEPMVV
C.briggsae_NCX1 KQLRSEHPDAPVDELEKHAMEKVVGEQKKSRAFYRIQTTRKMIGSGDIQKKMKNKKG......LLEPLVV
C.elegans_NCX2 REIRKQNPHITPTELQKQAEYEMISRGPKSRAFYRVQATRRLIGGGDIVKKRIDKEH......NKALDA.
C.briggsae_NCX2 REIRKQNPHITPTELQKQAEYEMISRGPKSRAFYRVQATRRLIGGGDIVKKRIDKEH......NKALDAL
T.spiralis RELRRKYPHLTDDSLAEVVAKQIEKEAPHDHLWYRIMAVRRLASSMRSRVRAKPVSEQVCQKLETLSRTG
M.brevicollis_1 VLKDVETEALTEDEIANIAAARKIDGTKVSRARFRIDANRRLRGAAPLLPDWQRALLD.....TQKSRAI
Salpingoeca IKRIARSNSMTMEDKVNLALAKKLKGERVSRAQFRIDATRKLVGSGGILPDYNKAKLQ.....EALLR..
S.kowalevskii_1 AATIAAIEAEKNSPH.....TKAWYRVNATRNMTGGQKLIPAVDPKLLSAYDQAKMGSAIS
S.kowalevskii_2 AATIAAIEAEKNSPH.....TRAWYRVSETRNMTGGQKLIPTVDPKLLLAYDQVKMGSSIS
T.adhaerens_1 AAKLAAAKLQEQEKK.....SYIWYRVGAARLVSGSKRVTPLLDARLQKIFDDIEMKNKKF
D.pulex_1 AAKLAAYKLITSKEH.....SRAWYRIGATRIFSGSKKIQPQLSIKLREVYDAINEHPDAV
P.humanus_corporis AAILAASKIIDSEPQ.....SAATYRMSAIRDLTGGRKLRPRLSLKLQEVYDTINQYPLGS
O.dioica AVASKMQGSFCVVPSFHVTKNLQCPTQGRSRAWYRVQATRTLTAGARIEPN.....KALSRMA
A.pisum AAKLAATKLIDSTH.....RGAMWYRIGAVRRFTGGKQIEPVLEDHLRQ.....
P.marinus AEVTRRRRLQERCPSQIRQRHGSSLTDDAVMRIIQAERPPRTTRAQHRIQASRMLTRRSGASKRSSVWNS
A.anophagefferens_1 LKKLQDPTLEESERHDLVKKLAMGQKAKPS.....RAVLRMNAVRAATGQKVIKADGPDPKV
E.huxleyi ARELQRMDPDAADGTSDAQGLASYLASSLGTLRSRAAYRVATTRGATGVAAPQARAAAEQEVAPPPSAAV
C.intestinalis SVVSKIASIRKLYSNNNAIQDES...SGN.VAFASSAYSTLESAGELTIDVLLHRRKRPKG.....
B.floridae EVVTKMVSIKALTSPAMRRQLAANDMSGK.FTFGTHTYSVLESSGAIEVDVLFHRRRLSKL.....
T.adhaerens_3 SEPKMAHFVNIITHRLNEQSNASSRNIAATFVFEIAAYSVREDSGSIDLIVLLNRHRALIKKSQENKNNK
N.vectensis_2 .....DDNLNRFVFGTSSYSVLKSAKHIDLEIILLQN.....
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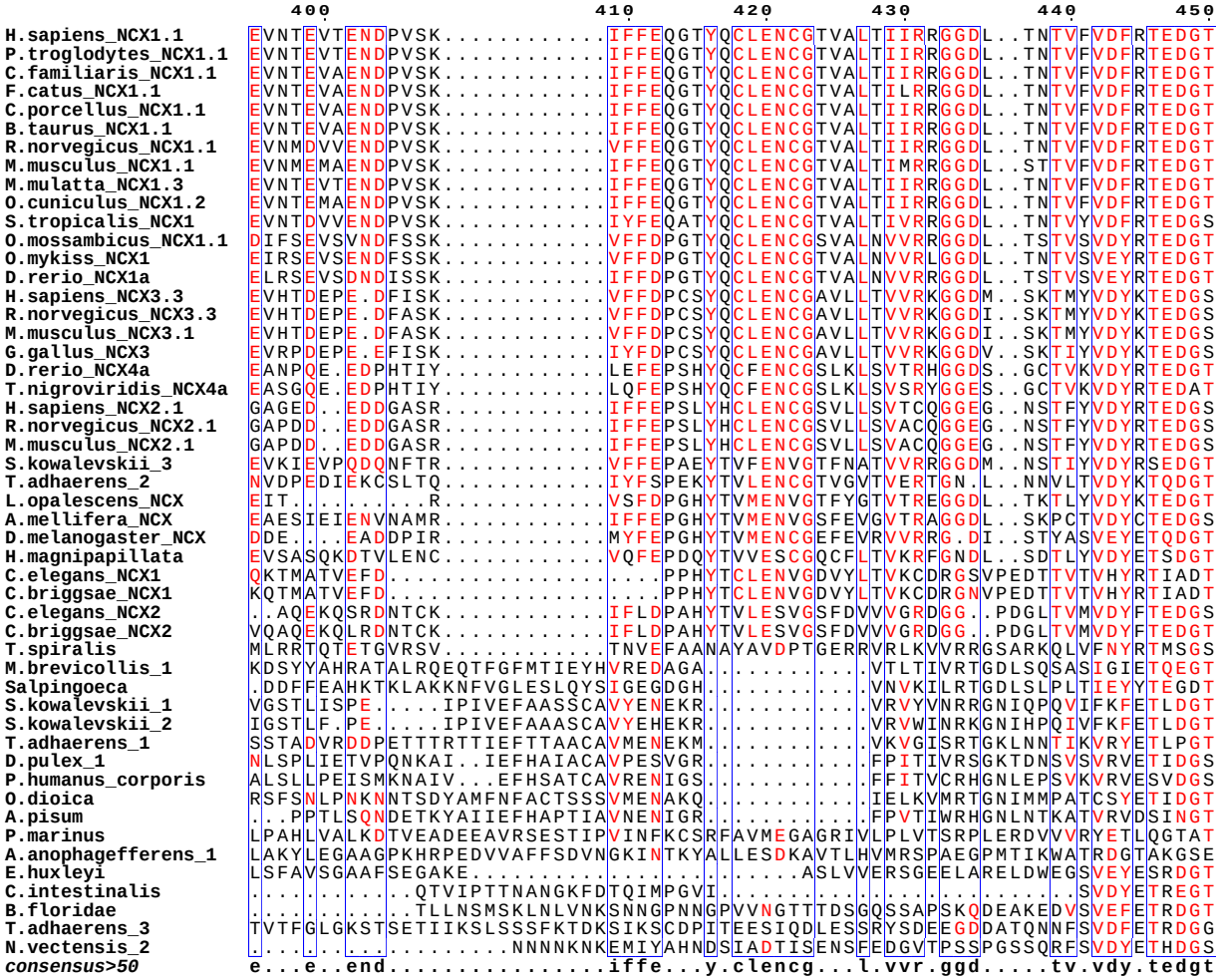
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C.familiaris_NCX1.1
F.catus_NCX1.1
C.porcellus_NCX1.1
B.taurus_NCX1.1
R.norvegicus_NCX1.1
M.musculus_NCX1.1
M.mulatta_NCX1.3
O.cuniculus_NCX1.2
S.tropicalis_NCX1
O.mossambicus_NCX1.1
O.mykiss_NCX1
D.rerio_NCX1a
H.sapiens_NCX3.3
R.norvegicus_NCX3.3
M.musculus_NCX3.1
G.gallus_NCX3
D.rerio_NCX4a
T.nigroviridis_NCX4a
H.sapiens_NCX2.1
R.norvegicus_NCX2.1
M.musculus_NCX2.1
S.kowalevskii_3
T.adhaerens_2
L.opalescens_NCX
A.mellifera_NCX
D.melanogaster_NCX
H.magnipapillata
C.elegans_NCX1
C.briggsae_NCX1
C.elegans_NCX2
C.briggsae_NCX2
T.spiralis
M.brevicollis_1
Salpingoeca
S.kowalevskii_1
S.kowalevskii_2
T.adhaerens_1
D.pulex_1
P.humanus_corporis
O.dioica
A.pisum
P.marinus
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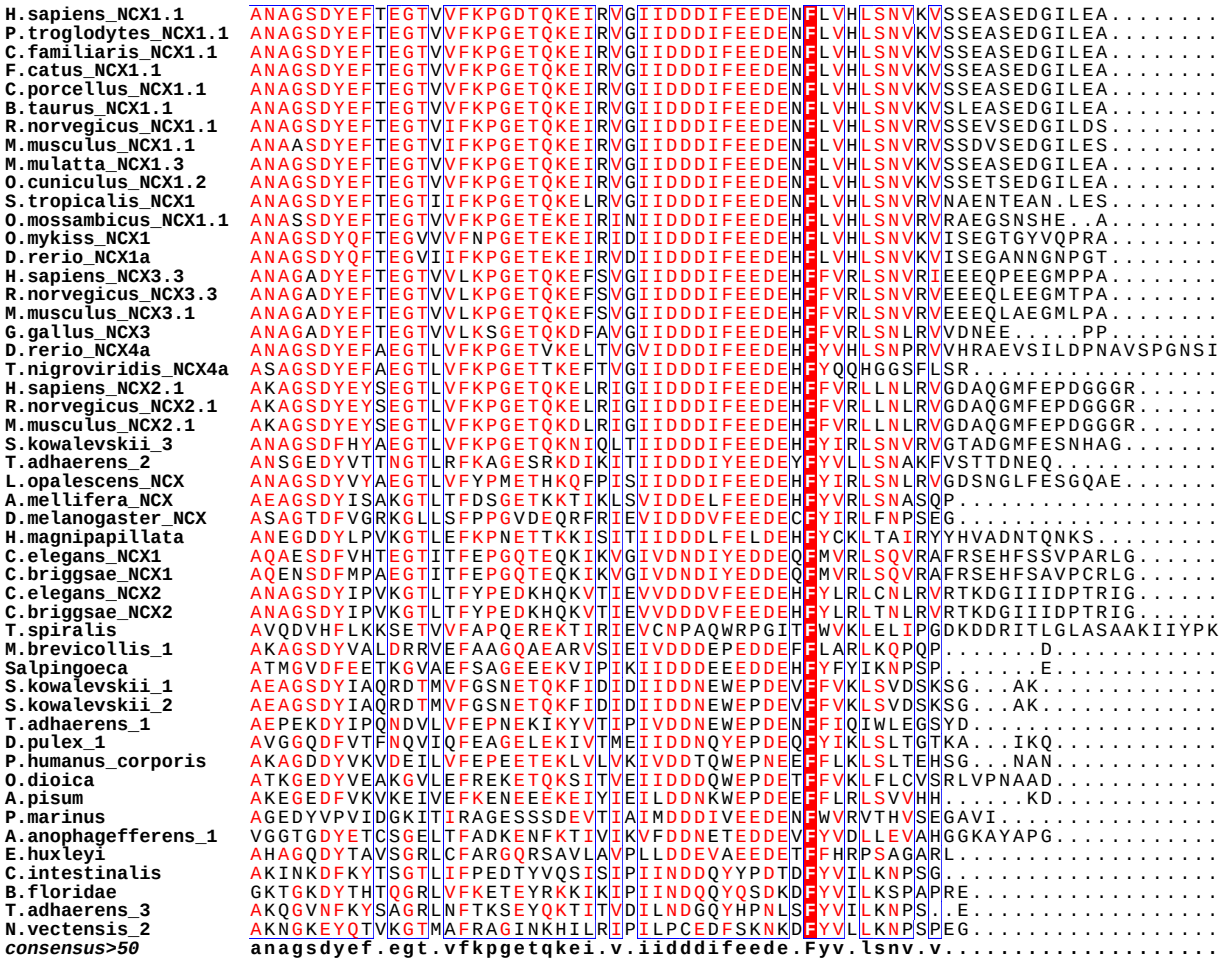
E.huxleyi
C.intestinalis
B.floridae
T.adhaerens_3
N.vectensis_2
consensus>50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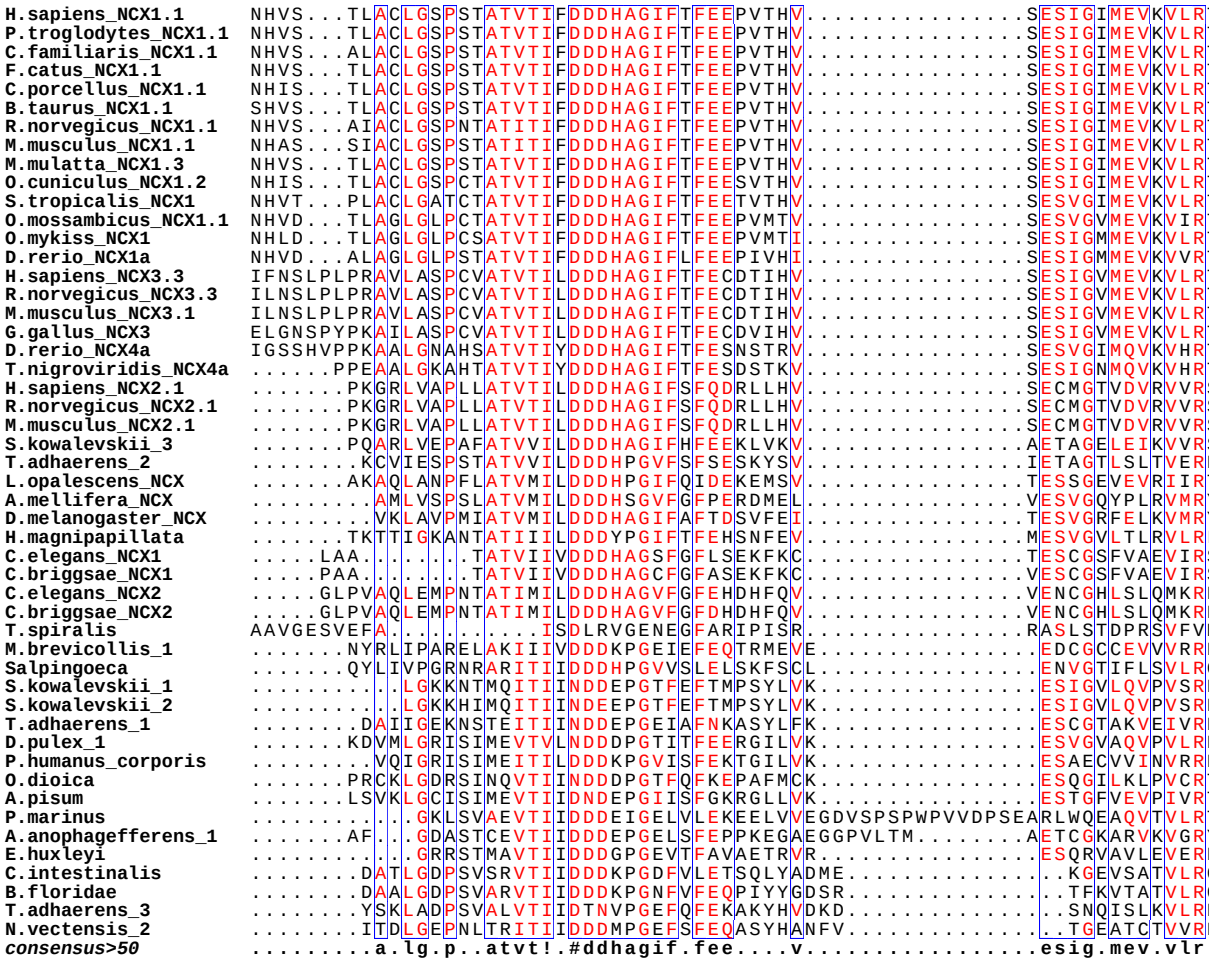
P.troglodytes_NCX1.1 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSSEASEDGILEA.....
C.familiaris_NCX1.1 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSSEASEDGILEA.....
F.catus_NCX1.1 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSSEASEDGILEA.....
C.porcellus_NCX1.1 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSSEASEDGILEA.....
B.taurus_NCX1.1 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSLEASEDGILEA.....
R.norvegicus_NCX1.1 ANAGSDYEFTEGTVIFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVRVSSEVSEDGILDS.....
M.musculus_NCX1.1 ANAASDYEFTEGTVIFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVRVSSDVSEDGILES.....
M.mulatta_NCX1.3 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSSEASEDGILEA.....
O.cuniculus_NCX1.2 ANAGSDYEFTEGTVVFKPGETQKEIRVGIIDDDIFEEDENFLVHLSNVKVSSETSEDGILEA.....
S.tropicalis_NCX1 ANAGSDYEFTEGTIIFKPGETQKELRVGIIDDDIFEEDENFLVHLSNVRVNAENTEAN.LES.....
O.mossambicus_NCX1.1 ANASSDYEFTEGTVVFKPGETEKEIRINIIDDDIFEEDEHFLVHLSNVRVRAEGSNSHE..A.....
O.mykiss_NCX1 ANAGSDYQFTEGVVVFNPGETEKEIRIDIIDDDIFEEDEHFLVHLSNVKVISEGTGYVQPRA.....
D.rerio_NCX1a ANAGSDYQFTEGVIIFKPGETEKEIRVDIIDDDIFEEDEHFLVHLSNVKVISEGANNGNPGT.....
H.sapiens_NCX3.3 ANAGADYEFTEGTVVLKPGETQKEFSVGIIDDDIFEEDEHFFVRLSNVRIEEEQPEEGMPPA.....
R.norvegicus_NCX3.3 ANAGADYEFTEGTVVLKPGETQKEFSVGIIDDDIFEEDEHFFVRLSNVRVEEEQLEEGMTPA.....
M.musculus_NCX3.1 ANAGADYEFTEGTVVLKPGETQKEFSVGIIDDDIFEEDEHFFVRLSNVRVEEEQLAEGMLPA.....
G.gallus_NCX3 ANAGADYEFTEGTVVLKSGETQKDFAVGIIDDDIFEEDEHFFVRLSNLRVVDNEE.....PP.....
D.rerio_NCX4a ANAGSDYEFAEGTLVFKPGETVKELTVGVIDDDIFEEDEHFYVHLSNPRVVHRAEVSILDPNAVSPGNSI
T.nigroviridis_NCX4a ASAGSDYEFAEGTLVFKPGETTKEFTVGIIDDDIFEEDEHFYQQHGGSFLSR.....
H.sapiens_NCX2.1 AKAGSDYEYSEGTLVFKPGETQKELRIGIIDDDIFEEDEHFFVRLLNLRVGDAQGMFEPDGGGR.....
R.norvegicus_NCX2.1 AKAGSDYEYSEGTLVFKPGETQKELRIGIIDDDIFEEDEHFFVRLLNLRVGDAQGMFEPDGGGR.....
M.musculus_NCX2.1 AKAGSDYEYSEGTLVFKPGETQKDLRIGIIDDDIFEEDEHFFVRLLNLRVGDAQGMFEPDGGGR.....
S.kowalevskii_3 ANAGSDFHYAEGTLVFKPGETQKNIQLTIIDDDIFEEDEHFYIRLSNVRVGTADGMFESNHAG.....
T.adhaerens_2 ANSGEDYVTTNGTLRFKAGESRKDIKITIIDDDIYEEDEYFYVLLSNAKFVSTTDNEQ.....
L.opalescens_NCX ANAGSDYVYAEGTLVFYPMETHKQFPISIIDDDIFEEDEHFYIRLSNLRVGDSNGLFESGQAE.....
A.mellifera_NCX AEAGSDYISAKGTLTFDSGETKKTIKLSVIDDELFEEDEHFYVRLSNASQP.....
D.melanogaster_NCX ASAGTDFVGRKGLLSFPPGVDEQRFRIEVIDDDVFEEDECFYIRLFNPSEG.....
H.magnipapillata ANEGDDYLPVKGTLEFKPNETTKKISITIIDDDLFELDEHFYCKLTAIRYYHVADNTQNKS.....
C.elegans_NCX1 AQAESDFVHTEGTITFEPGQTEQKIKVGIVDNDIYEDDEQFMVRLSQVRAFRSEHFSSVPARLG.....
C.briggsae_NCX1 AQENSDFMPAEGTITFEPGQTEQKIKVGIVDNDIYEDDEQFMVRLSQVRAFRSEHFSAVPCRLG.....
C.elegans_NCX2 ANAGSDYIPVKGTLTFYPEDKHQKVTIEVVDDDVFEEDEHFYLRLCNLRVRTKDGIIIDPTRIG.....
C.briggsae_NCX2 ANAGSDYIPVKGTLTFYPEDKHQKVTIEVVDDDVFEEDEHFYLRLTNLRVRTKDGIIIDPTRIG.....
T.spiralis AVQDVHFLKKSETVVFAPQEREKTIRIEVCNPAQWRPGITFWVKLELIPGDKDDRITLGLASAAKIIYPK
M.brevicollis_1 AKAGSDYVALDRRVEFAAGQAEARVSIEIVDDDEPEDDEFFLARLKQPQP.....D.....
Salpingoeca ATMGVDFEETKGVAEFSAGEEEKVIPIKIIDDDEEEDDEHFYFYIKNPSP.....E.....
S.kowalevskii_1 AEAGSDYIAQRDTMVFGSNETQKFIDIDIIDDNEWEPDEVFFVKLSVDSKSG...AK.....
S.kowalevskii_2 AEAGSDYIAQRDTMVFGSNETQKFIDIDIIDDNEWEPDEVFFVKLSVDSKSG...AK.....
T.adhaerens_1 AEPEKDYIPQNDVLVFEPNEKIKYVTIPIVDDNEWEPDENFFIQIWLEGSYD.....
D.pulex_1 AVGGQDFVTFNQVIQFEAGELEKIVTMEIIDDNQYEPDEQFYIKLSLTGTKA...IKQ.....
P.humanus_corporis AKAGDDYVKVDEILVFEPEETEKLVLVKIVDDTQWEPNEEFFLKLSLTEHSG...NAN.....
O.dioica ATKGEDYVEAKGVLEFREKETQKSITVEIIDDDQWEPDETFFVKLFLCVSRLVPNAAD.....
A.pisum AKEGEDFVKVKEIVEFKENEEKEIYIEILDDNKWEPDEEFFLRLSVVHH.....KD.....
P.marinus AGEDYVPVIDGKITIRAGESSSDEVTIAIMDDDIVEEDENFWVRVTHVSEGAVI.....
A.anophagefferens_1 VGGTGDYETCSGELTFADKENFKTIVIKVFDDNETEDDEVFYVDLLEVAHGGKAYAPG.....
E.huxleyi AHAGQDYTAVSGRLCFARGQRSAVLAVPLLDDEVAEEDETFFHRPSAGARL.....
C.intestinalis AKINKDFKYTSGTLIFPEDTYVQSISIPIINDDQYYPDTDFYVILKNPSG.....
B.floridae GKTGKDYTHTQGRLVFKETEYRKKIKIPIINDQQYQSDKDFYVILKSPAPRE.....
T.adhaerens_3 AKQGVNFKYSAGRLNFTKSEYQKTITVDILNDGQYHPNLSFYVILKNPS..E.....
N.vectensis_2 AKNGKEYQTVKGTMAFRAGINKHILRIPILPCEDFSKNKDFYVLLKNPSPEG.....
consensus>50 anagsdyef.egt.vfkpgetqkei.v.iidddifeede.Fyv.lsnv.v.....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P.troglodytes_NCX1.1 NHVS...TLACLGSPSTATVTIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
C.familiaris_NCX1.1 NHVS...ALACLGSPSTATVTIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
F.catus_NCX1.1 NHVS...TLACLGSPSTATVTIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
C.porcellus_NCX1.1 NHIS...TLACLGSPSTATVTIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
B.taurus_NCX1.1 SHVS...TLACLGSPSTATVTIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
R.norvegicus_NCX1.1 NHVS...AIACLGSPNTATITIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
M.musculus_NCX1.1 NHAS...SIACLGSPSTATITIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
M.mulatta_NCX1.3 NHVS...TLACLGSPSTATVTIFDDDHAGIFTFEEPVTHV.....SESIGIMEVKVLRT
O.cuniculus_NCX1.2 NHIS...TLACLGSPCTATVTIFDDDHAGIFTFEESVTHV.....SESIGIMEVKVLRT
S.tropicalis_NCX1 NHVT...PLACLGATCTATVTIFDDDHAGIFTFEETVTHV.....SESVGIMEVKVLRT
O.mossambicus_NCX1.1 NHVD...TLAGLGLPCTATVTIFDDDHAGIFTFEEPVMTV.....SESVGVMEVKVIRT
O.mykiss_NCX1 NHLD...TLAGLGLPCSATVTIFDDDHAGIFTFEEPVMTI.....SESIGMMEVKVLRT
D.rerio_NCX1a NHVD...ALAGLGLPSTATVTIFDDDHAGIFLFEEPIVHI.....SESIGMMEVKVVRT
H.sapiens_NCX3.3 IFNSLPLPRAVLASPCVATVTILDDDHAGIFTFECDTIHV.....SESIGVMEVKVLRT
R.norvegicus_NCX3.3 ILNSLPLPRAVLASPCVATVTILDDDHAGIFTFECDTIHV.....SESIGVMEVKVLRT
M.musculus_NCX3.1 ILNSLPLPRAVLASPCVATVTILDDDHAGIFTFECDTIHV.....SESIGVMEVKVLRT
G.gallus_NCX3 ELGNSPYPKAILASPCVATVTILDDDHAGIFTFECDVIHV.....SESIGVMEVKVLRT
D.rerio_NCX4a IGSSHVPPKAALGNAHSATVTIYDDDHAGIFTFESNSTRV.....SESVGIMQVKVHRT
T.nigroviridis_NCX4a .....PPEAALGKAHTATVTIYDDDHAGIFTFESDSTKV.....SESIGNMQVKVHRT
H.sapiens_NCX2.1 .....PKGRLVAPLLATVTILDDDHAGIFSFQDRLLHV.....SECMGTVDVRVVRS
R.norvegicus_NCX2.1 .....PKGRLVAPLLATVTILDDDHAGIFSFQDRLLHV.....SECMGTVDVRVVRS
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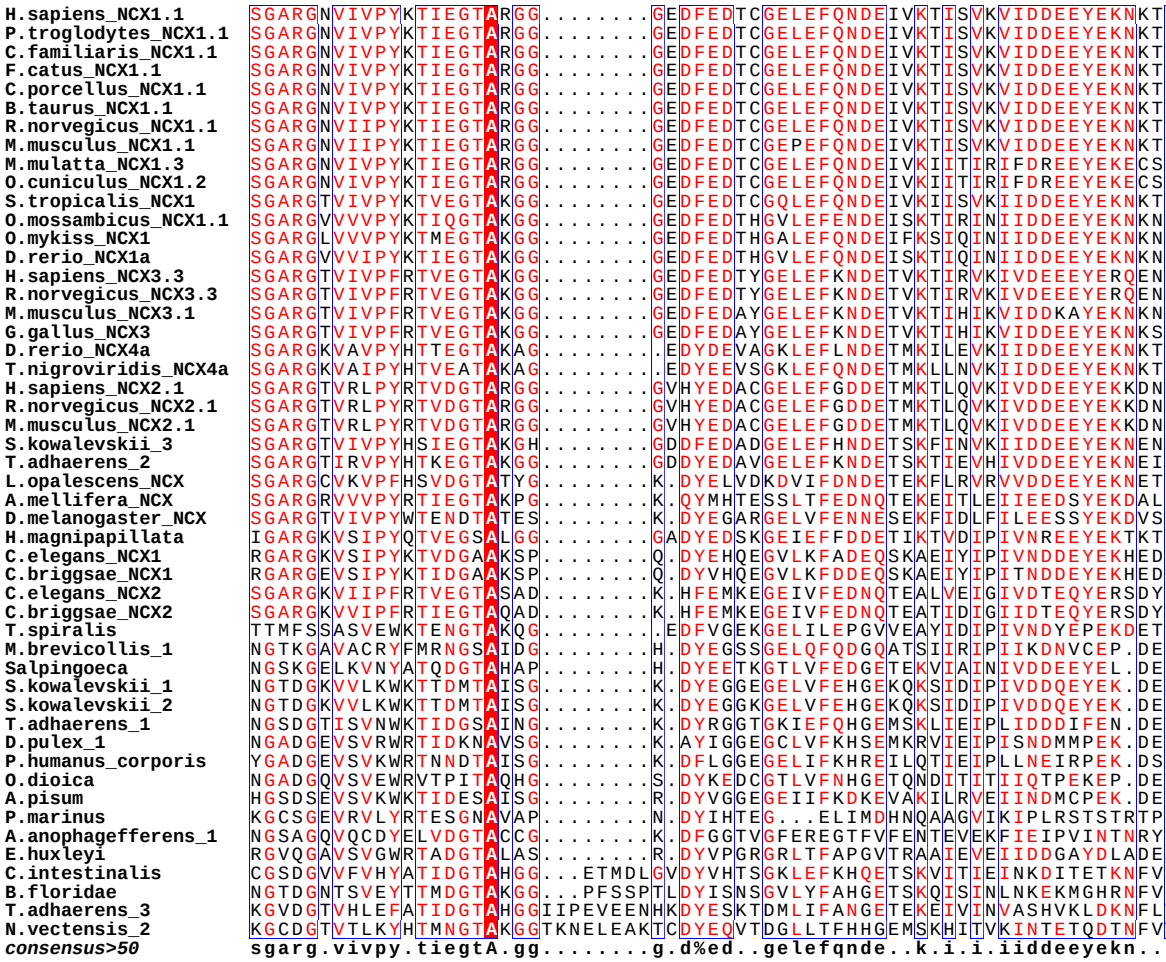
S.kowalevskii_3 .....PQARLVEPAFATVVILDDDHAGIFHFEEKLVKV.....AETAGELEIKVVRS
T.adhaerens_2 .....KCVIESPSTATVVILDDDHPGVFSFSESKYSV.....IETAGTLSLTVERK
L.opalescens_NCX .....AKAQLANPFLATVMILDDDHPGIFQIDEKEMSV.....TESSGEVEVRIIRT
A.mellifera_NCX .....AMLVSPSLATVMILDDDHSGVFGFPERDMEL.....VESVGQYPLRVMRY
D.melanogaster_NCX .....VKLAVPMIATVMILDDDHAGIFAFTDSVFEI.....TESVGRFELKVMRY
H.magnipapillata .....TKTTIGKANTATIIILDDDYPGIFTFEHSNFEV.....MESVGVLTLRVLRL
C.elegans_NCX1 .....LAA.....TATVIIVDDDHAGSFGFLSEKFKC.....TESCGSFVAEVIRS
C.briggsae_NCX1 .....PAA.....TATVIIVDDDHAGCFGFASEKFKC.....VESCGSFVAEVIRS
C.elegans_NCX2 .....GLPVAQLEMPNTATIMILDDDHAGVFGFEHDHFQV.....VENCGHLSLQMKRH
C.briggsae_NCX2 .....GLPVAQLEMPNTATIMILDDDHAGVFGFDHDHFQV.....VENCGHLSLQMKRH
T.spiralis AAVGESVEFA.....ISDLRVGENEGFARIPISR.....RASLSTDPRSVFVM
M.brevicollis_1 .....NYRLIPARELAKIIIVDDDKPGEIEFEQTRMEVE.....EDCGCCEVVVRRR
Salpingoeca .....QYLIVPGRNRARITIIDDDHPGVVSLELSKFSCL.....ENVGTIFLSVLRQ
S.kowalevskii_1 .....LGKKNTMQITIINDDEPGTFEFTMPSYLVK.....ESIGVLQVPVSRN
S.kowalevskii_2 .....LGKKHIMQITIINDEEPGTFEFTMPSYLVK.....ESIGVLQVPVSRN
T.adhaerens_1 .....DAIIGEKNSTEITIINDDEPGEIAFNKASYLFK.....ESCGTAKVEIVRK
D.pulex_1 .....KDVMLGRISIMEVTVLNDDDPGTITFEERGILVK.....ESVGVAQVPVLRK
P.humanus_corporis .....VQIGRISIMEITILDDDKPGVISFEKTGILVK.....ESAECVVINVRRK
O.dioica .....PRCKLGDRSINQVTIINDDDPGTFQFKEPAFMCK.....ESQGILKLPVCRT
A.pisum .....LSVKLGCISIMEVTIIDNDEPGIISFGKRGLLVK.....ESTGFVEVPIVRT
P.marinus .....GKLSVAEVTIIDDDEIGELVLEKEELVVEGDVSPSPWPVVDPSEARLWQEAQVTVLRT
A.anophagefferens_1 .....AF...GDASTCEVTIIDDDEPGELSFEPPKEGAEGGPVLTM.....AETCGKARVKVGRY
E.huxleyi .....GRRSTMAVTIIDDDGPGEVTFAVAETRVR.....ESQRVAVLEVERK
C.intestinalis .....DATLGDPSVSRVTIIDDDKPGDFVLETSQLYADME.....KGEVSATVLRQ
B.floridae .....DAALGDPSVARVTIIDDDKPGNFVFEQPIYYGDSR.....TFKVTATVLRQ
T.adhaerens_3 .....YSKLADPSVALVTIIDTNVPGEFQFEKAKYHVDKD.....SNQISLKVLRK
N.vectensis_2 .....ITDLGEPNLTRITIIDDDMPGEFSFEQASYHANFV.....TGEATCTVVRR
consensus>50 .....a.lg.p..atvt!.#ddhagif.fee....v.....esig.mev.vlr.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C.familiaris_NCX1.1
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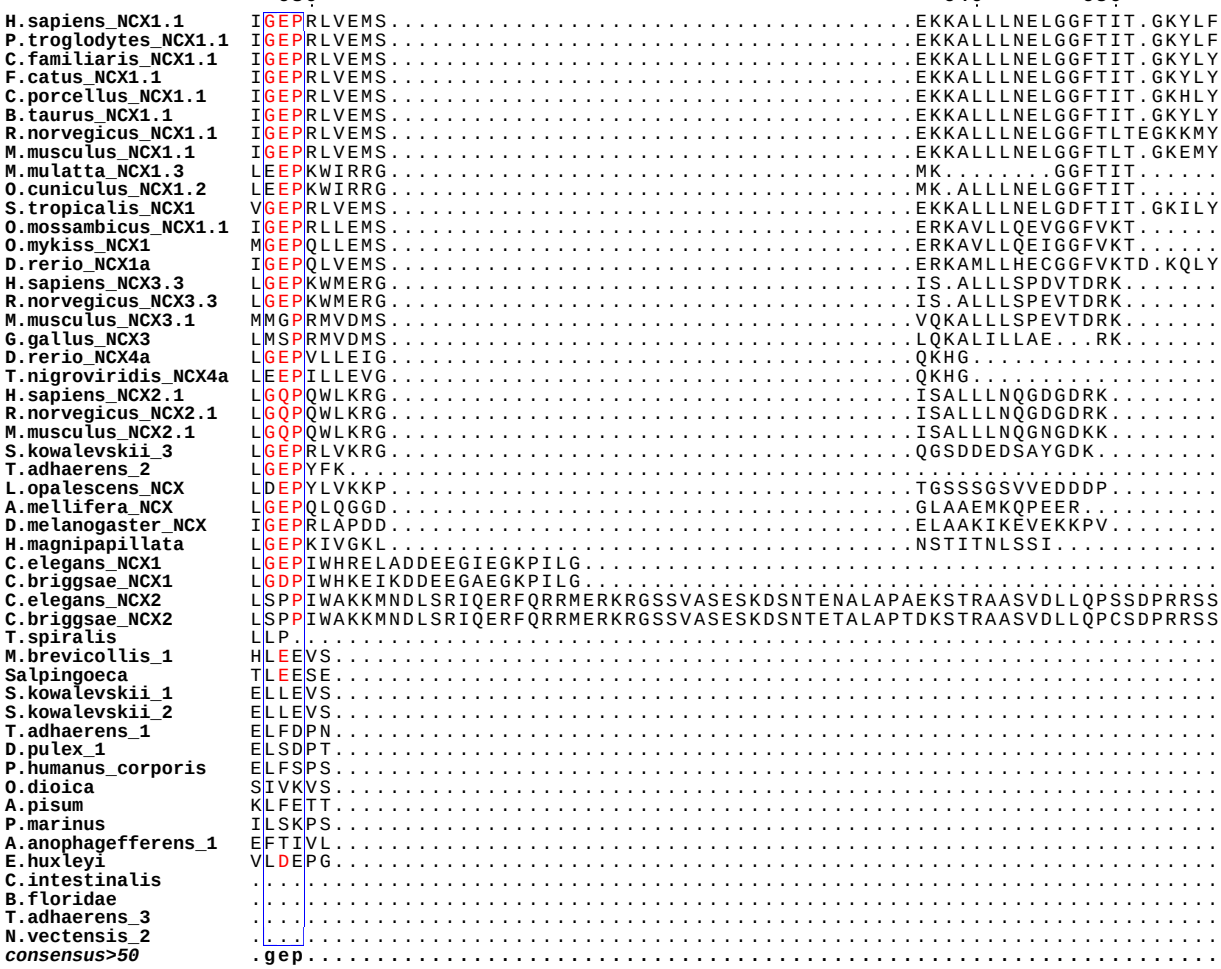
C.porcellus_NCX1.1
B.taurus_NCX1.1
R.norvegicus_NCX1.1
M.musculus_NCX1.1
M.mulatta_NCX1.3
O.cuniculus_NCX1.2
S.tropicalis_NCX1
O.mossambicus_NCX1.1
O.mykiss_NCX1
D.rerio_NCX1a
H.sapiens_NCX3.3
R.norvegicus_NCX3.3
M.musculus_NCX3.1
G.gallus_NCX3
D.rerio_NCX4a
T.nigroviridis_NCX4a
H.sapiens_NCX2.1
R.norvegicus_NCX2.1
M.musculus_NCX2.1
S.kowalevskii_3
T.adhaerens_2
L.opalescens_NCX
A.mellifera_NCX
D.melanogaster_NCX
H.magnipapillata
C.elegans_NCX1
C.briggsae_NCX1
C.elegans_NCX2
C.briggsae_NCX2
T.spiralis
M.brevicollis_1
Salpingoeca
S.kowalevskii_1
S.kowalevskii_2
T.adhaerens_1
D.pulex_1
P.humanus_corporis
O.dioica
A.pisum
P.marinus
A.anophagefferens_1
E.huxleyi
C.intestinalis
B.floridae
T.adhaerens_3
N.vectensis_2
consensus>50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640
650
H.sapiens_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTIT.GKYLF
P.troglodytes_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTIT.GKYLF
C.familiaris_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTIT.GKYLY
F.catus_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTIT.GKYLY
C.porcellus_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTIT.GKHLY
B.taurus_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTIT.GKYLY
R.norvegicus_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTLTEGKKMY
M.musculus_NCX1.1 IGEPRLVEMS.....EKKALLLNELGGFTLT.GKEMY
M.mulatta_NCX1.3 LEEPKWIRRG.....MK.....GGFTIT.....
O.cuniculus_NCX1.2 LEEPKWIRRG.....MK.ALLLNELGGFTIT.....
S.tropicalis_NCX1 VGEPRLVEMS.....EKKALLLNELGDFTIT.GKILY
O.mossambicus_NCX1.1 IGEPRLLEMS.....ERKAVLLQEVGGFVKT.....
O.mykiss_NCX1 MGEPQLLEMS.....ERKAVLLQEIGGFVKT.....
D.rerio_NCX1a IGEPQLVEMS.....ERKAMLLHECGGFVKTD.KQLY
H.sapiens_NCX3.3 LGEPKWMERG.....IS.ALLLSPDVTDRK.....
R.norvegicus_NCX3.3 LGEPKWMERG.....IS.ALLLSPEVTDRK.....
M.musculus_NCX3.1 MMGPRMVDMS.....VQKALLLSPEVTDRK.....
G.gallus_NCX3 LMSPRMVDMS.....LQKALILLAE...RK.....
D.rerio_NCX4a LGEPVLLEIG.....QKHG.....
T.nigroviridis_NCX4a LEEPILLEVG.....QKHG.....
H.sapiens_NCX2.1 LGQPQWLKRG.....ISALLLNQGDGDRK.....
R.norvegicus_NCX2.1 LGQPQWLKRG.....ISALLLNQGDGDRK.....
M.musculus_NCX2.1 LGQPQWLKRG.....ISALLLNQGNGDKK.....
S.kowalevskii_3 LGEPRLVKRG.....QGSDDEDSAYGDK.....
T.adhaerens_2 LGEPYFK.....
L.opalescens_NCX LDEPYLVKKP.....TGSSSGSVVEDDDP.....
A.mellifera_NCX LGEPQLQGGD.....GLAAEMKQPEER.....
D.melanogaster_NCX IGEPRLAPDD.....ELAAKIKEVEKKPV.....
H.magnipapillata LGEPKIVGKL.....NSTITNLSSI.....
C.elegans_NCX1 LGEPIWHRELADDEEGIEGKPILG.....
C.briggsae_NCX1 LGDPIWHKEIKDDEEGAEGKPILG.....
C.elegans_NCX2 LSPPIWAKKMNDLSRIQERFQRRMERKRGSSVASESKDSNTENALAPAEKSTRAASVDLLQPSSDPRRSS
C.briggsae_NCX2 LSPPIWAKKMNDLSRIQERFQRRMERKRGSSVASESKDSNTETALAPTDKSTRAASVDLLQPCSDPRRSS
T.spiralis LLP.....
M.brevicollis_1 HLEEVS.....
Salpingoeca TLEESE.....
S.kowalevskii_1 ELLEVS.....
S.kowalevskii_2 ELLEVS.....
T.adhaerens_1 ELFDPN.....
D.pulex_1 ELSDPT.....
P.humanus_corporis ELFSPS.....
O.dioica SIVKVS.....
A.pisum KLFETT.....
P.marinus ILSKPS.....
A.anophagefferens_1 EFTIVL.....
E.huxleyi VLDEPG.....
C.intestinalis .....
B.floridae .....
T.adhaerens_3 .....
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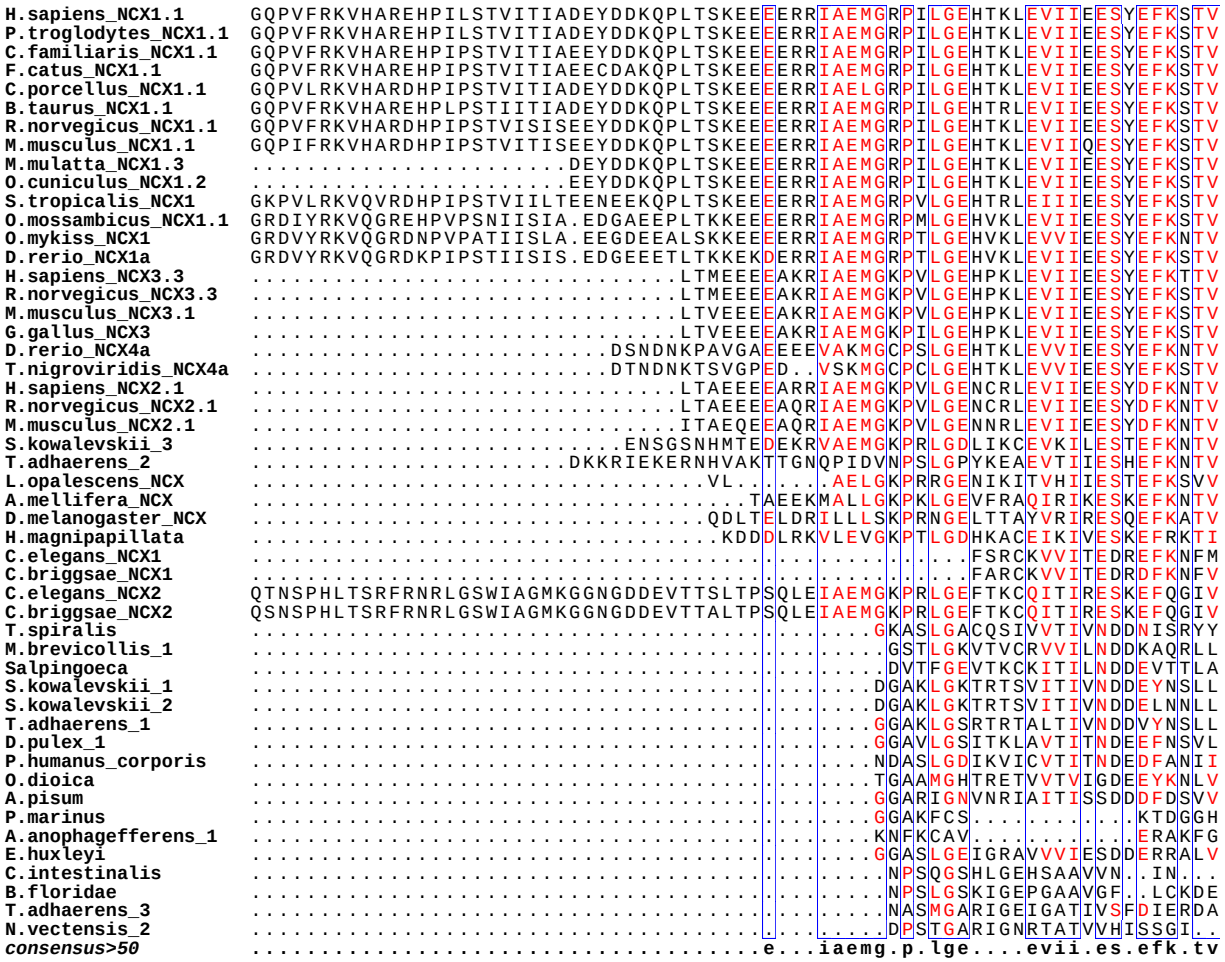
consensus>50 .gep.....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F.catus_NCX1.1 GQPVFRKVHAREHPIPSTVITIAEECDAKQPLTSKEEEERRIAEMGRPILGEHTKLEVIIEESYEFKSTV
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R.norvegicus_NCX1.1 GQPVFRKVHARDHPIPSTVISISEEYDDKQPLTSKEEEERRIAEMGRPILGEHTKLEVIIEESYEFKSTV
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M.mulatta_NCX1.3 .....DEYDDKQPLTSKEEEERRIAEMGRPILGEHTKLEVIIEESYEFKSTV
O.cuniculus_NCX1.2 .....EEYDDKQPLTSKEEEERRIAEMGRPILGEHTKLEVIIEESYEFKSTV
S.tropicalis_NCX1 GKPVLRKVQVRDHPIPSTVIILTEENEEKQPLTSKEEEERRIAEMGRPVLGEHTRLEIIIEESYEFKSTV
O.mossambicus_NCX1.1 GRDIYRKVQGREHPVPSNIISIA.EDGAEEPLTKKEEEERRIAEMGRPMLGEHVKLEVIIEESYEFKSTV
O.mykiss_NCX1 GRDVYRKVQGRDNPVPATIISLA.EEGDEEALSKKEEEERRIAEMGRPTLGEHVKLEVVIEESYEFKNTV
D.rerio_NCX1a GRDVYRKVQGRDKPIPSTIISIS.EDGEEETLTKKEKDERRIAEMGRPTLGEHVKLEVIIEESYEFKSTV
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M.musculus_NCX3.1 .....LTVEEEEAKRIAEMGKPVLGEHPKLEVIIEESYEFKSTV
G.gallus_NCX3 .....LTVEEEEAKRIAEMGKPILGEHPKLEVIIEESYEFKSTV
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T.nigroviridis_NCX4a .....DTNDNKTSVGPED..VSKMGCPCLGEHTKLEVVIEESYEFKSTV
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T.adhaerens_2 .....DKKRIEKERNHVAKTTGNQPIDVNPSLGPYKEAEVTIIESHEFKNTV
L.opalescens_NCX .....VL.....AELGKPRRGENIKITVHIIESTEFKSVV
A.mellifera_NCX .....TAEEKMALLGKPKLGEVFRAQIRIKESKEFKNTV
D.melanogaster_NCX .....QDLTELDRILLLSKPRNGELTTAYVRIRESQEFKATV
H.magnipapillata .....KDDDLRKVLEVGKPTLGDHKACEIKIVESKEFRKTI
C.elegans_NCX1 .....FSRCKVVITEDREFKNFM
C.briggsae_NCX1 .....FARCKVVITEDRDFKNFV
C.elegans_NCX2 QTNSPHLTSRFRNRLGSWIAGMKGGNGDDEVTTSLTPSQLEIAEMGKPRLGEFTKCQITIRESKEFQGIV
C.briggsae_NCX2 QSNSPHLTSRFRNRLGSWIAGMKGGNGDDEVTTALTPSQLEIAEMGKPRLGEFTKCQITIRESKEFQGIV
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M.brevicollis_1 .....GSTLGKVTVCRVVILNDDKAQRLL
Salpingoeca .....DVTFGEVTKCKITILNDDEVTTLA
S.kowalevskii_1 .....DGAKLGKTRTSVITIVNDDEYNSLL
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T.adhaerens_1 .....GGAKLGSRTRTALTIVNDDVYNSLL
D.pulex_1 .....GGAVLGSITKLAVTITNDEEFNSVL
P.humanus_corporis .....NDASLGDIKVICVTITNDEDFANII
O.dioica .....TGAAMGHTRETVVTVIGDEEYKNLV
A.pisum .....GGARIGNVNRIAITISSDDDFDSVV
P.marinus .....GGAKFCS.....KTDGGH
A.anophagefferens_1 .....KNFKCAV.....ERAKFG
E.huxleyi .....GGASLGEIGRAVVVIESDDERRALV
C.intestinalis .....NPSQGSHLGEHSAAVVN..IN...
B.floridae .....NPSLGSKIGEPGAAVGF..LCKDE
T.adhaerens_3 .....NASMGARIGEIGATIVSFDIERDA
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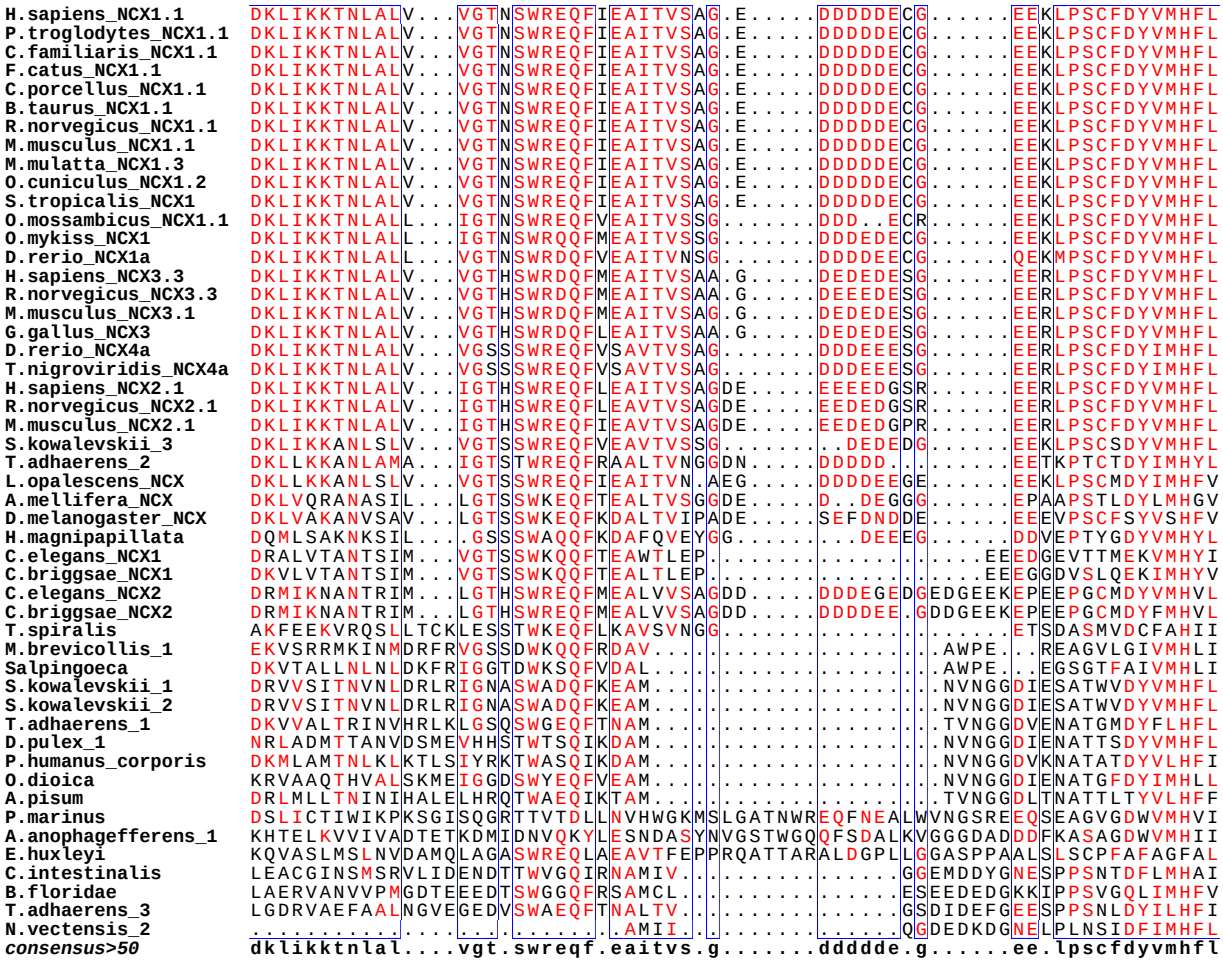
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M.mulatta_NCX1.3
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O.mykiss_NCX1
D.rerio_NCX1a
H.sapiens_NCX3.3
R.norvegicus_NCX3.3
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G.gallus_NCX3
D.rerio_NCX4a
T.nigroviridis_NCX4a
H.sapiens_NCX2.1
R.norvegicus_NCX2.1
M.musculus_NCX2.1
S.kowalevskii_3
T.adhaerens_2
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D.melanogaster_NCX
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C.elegans_NCX1
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O.dioica
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C.intestinalis
B.floridae
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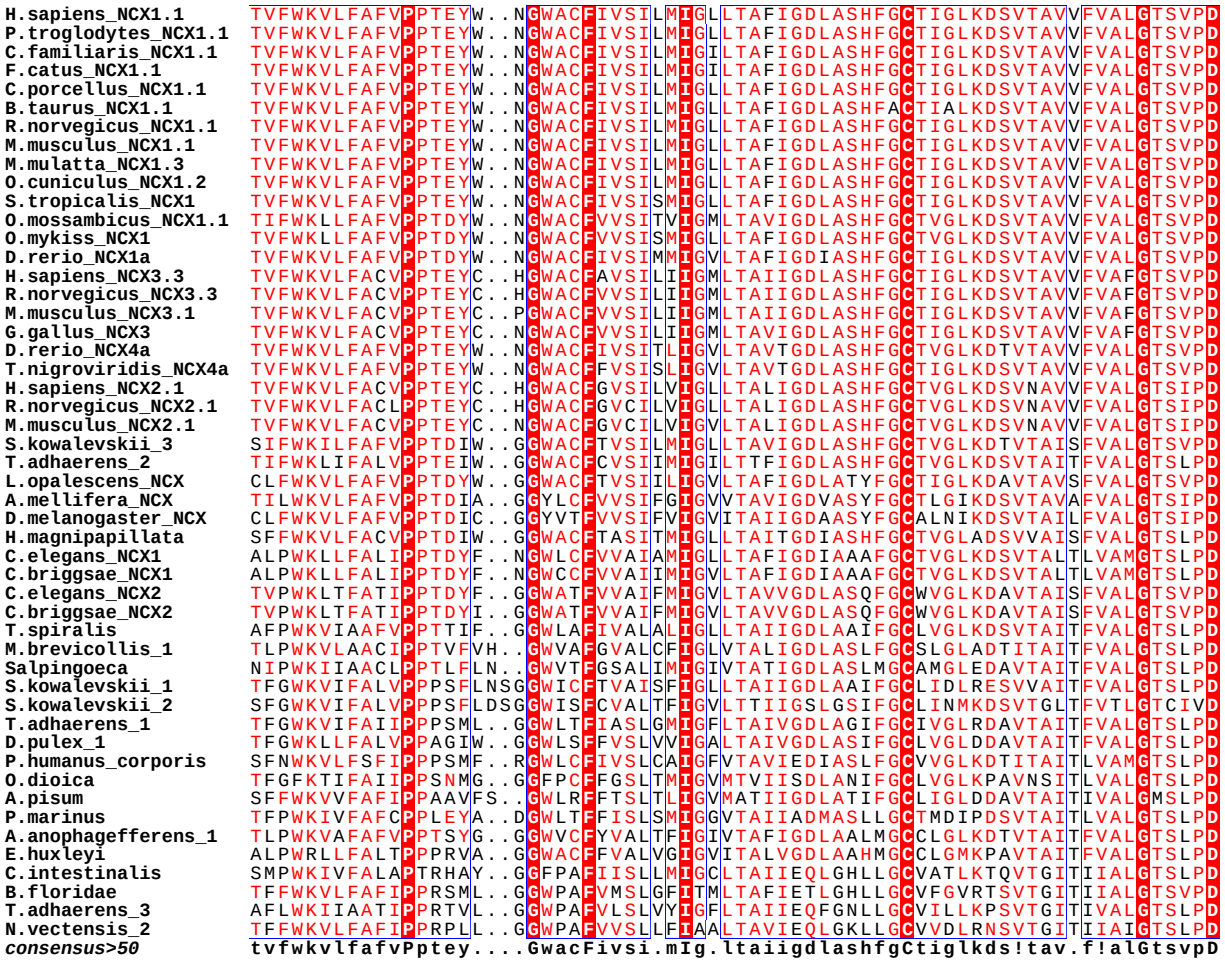
N.vectensis_2
consensus>50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P.troglodytes_NCX1.1 TVFWKVLFAFVPPTEYW..NGWACFIVSILMIGLLTAFIGDLASHFGCTIGLKDSVTAVVFVALGTSVPD
C.familiaris_NCX1.1 TVFWKVLFAFVPPTEYW..NGWACFIVSILMIGILTAFIGDLASHFGCTIGLKDSVTAVVFVALGTSVPD
F.catus_NCX1.1 TVFWKVLFAFVPPTEYW..NGWACFIVSILMIGILTAFIGDLASHFGCTIGLKDSVTAVVFVALGTSVPD
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B.taurus_NCX1.1 TVFWKVLFAFVPPTEYW..NGWACFIVSILMIGLLTAFIGDLASHFACTIALKDSVTAVVFVALGTSVPD
R.norvegicus_NCX1.1 TVFWKVLFAFVPPTEYW..NGWACFIVSILMIGLLTAFIGDLASHFGCTIGLKDSVTAVVFVALGTSVPD
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M.mulatta_NCX1.3 TVFWKVLFAFVPPTEYW..NGWACFIVSILMIGLLTAFIGDLASHFGCTIGLKDSVTAVVFVALGTSVPD
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S.tropicalis_NCX1 TVFWKVLFAFVPPTEYW..NGWACFIVSISMIGLLTAFIGDLASHFGCTIGLKDSVTAVVFVALGTSVPD
O.mossambicus_NCX1.1 TIFWKLLFAFVPPTDYW..NGWACFVVSITVIGMLTAVIGDLASHFGCTVGLKDSVTAVVFVALGTSVPD
O.mykiss_NCX1 TVFWKLLFAFVPPTDYW..NGWACFVVSISMIGLLTAFIGDLASHFGCTVGLKDSVTAVVFVALGTSVPD
D.rerio_NCX1a TVFWKVLFAFVPPTDYW..NGWACFIVSIMMIGVLTAFIGDIASHFGCTIGLKDSVTAVVFVALGTSVPD
H.sapiens_NCX3.3 TVFWKVLFACVPPTEYC..HGWACFAVSILIIGMLTAIIGDLASHFGCTIGLKDSVTAVVFVAFGTSVPD
R.norvegicus_NCX3.3 TVFWKVLFACVPPTEYC..HGWACFVVSILIIGMLTAIIGDLASHFGCTIGLKDSVTAVVFVAFGTSVPD
M.musculus_NCX3.1 TVFWKVLFACVPPTEYC..PGWACFVVSILIIGMLTAIIGDLASHFGCTIGLKDSVTAVVFVAFGTSVPD
G.gallus_NCX3 TVFWKVLFACVPPTEYC..NGWACFVVSILIIGMLTAVIGDLASHFGCTIGLKDSVTAVVFVAFGTSVPD
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S.kowalevskii_3 SIFWKILFAFVPPTDIW..GGWACFTVSILMIGLLTAVIGDLASHFGCTVGLKDTVTAISFVALGTSVPD
T.adhaerens_2 TIFWKLIFALVPPTEIW..GGWACFCVSIIMIGILTTFIGDLASHFGCTVGLKDSVTAITFVALGTSLPD
L.opalescens_NCX CLFWKVLFAFVPPTDYW..GGWACFTVSIILIGVLTAFIGDLATYFGCTIGLKDAVTAVSFVALGTSVPD
A.mellifera_NCX TILWKVLFAFVPPTDIA..GGYLCFVVSIFGIGVVTAVIGDVASYFGCTLGIKDSVTAVAFVALGTSIPD
D.melanogaster_NCX CLFWKVLFAFVPPTDIC..GGYVTFVVSIFVIGVITAIIGDAASYFGCALNIKDSVTAILFVALGTSIPD
H.magnipapillata SFFWKVLFACVPPTDIW..GGWACFTASITMIGLLTAITGDIASHFGCTVGLADSVVAISFVALGTSLPD
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C.briggsae_NCX1 ALPWKLLFALIPPTDYF..NGWCCFVVAIIMIGVLTAFIGDIAAAFGCTVGLKDSVTALTLVAMGTSLPD
C.elegans_NCX2 TVPWKLTFATIPPTDYF..GGWATFVVAIFMIGVLTAVVGDLASQFGCWVGLKDAVTAISFVALGTSVPD
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M.brevicollis_1 TLPWKVLAACIPPTVFVH..GWVAFGVALCFIGLVTALIGDLASLFGCSLGLADTITAITFVALGTSLPD
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D.pulex_1 TFGWKLLFALVPPAGIW..GGWLSFFVSLVVIGALTAIVGDLASIFGCLVGLDDAVTAITFVALGTSLPD
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A.pisum SFFWKVVFAFIPPAAVFS..GWLRFFTSLTLIGVMATIIGDLATIFGCLIGLDDAVTAITIVALGMSLPD
P.marinus TFPWKIVFAFCPPLEYA..DGWLTFFISLSMIGGVTAIIADMASLLGCTMDIPDSVTAITLVALGTSLPD
A.anophagefferens_1 TLPWKVAFAFVPPTSYG..GGWVCFYVALTFIGIVTAFIGDLAALMGCCLGLKDTVTAITFVALGTSLPD
E.huxleyi ALPWRLLFALTPPPRVA..GGWACFFVALVGIGVITALVGDLAAHMGCCLGMKPAVTAITFVALGTSLPD
C.intestinalis SMPWKIVFALAPTRHAY..GGFPAFIISLLMIGCLTAIIEQLGHLLGCVATLKTQVTGITIIALGTSLPD
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T.adhaerens_3 AFLWKIIAATIPPRTVL..GGWPAFVLSLVYIGFLTAIIEQFGNLLGCVILLKPSVTGITIVALGTSLPD
N.vectensis_2 TFFWKVLFAFIPPRPLL..GGWPAFVVSLLFIAALTAVIEQLGKLLGCVVDLRNSVTGITIIAIGTSLPD
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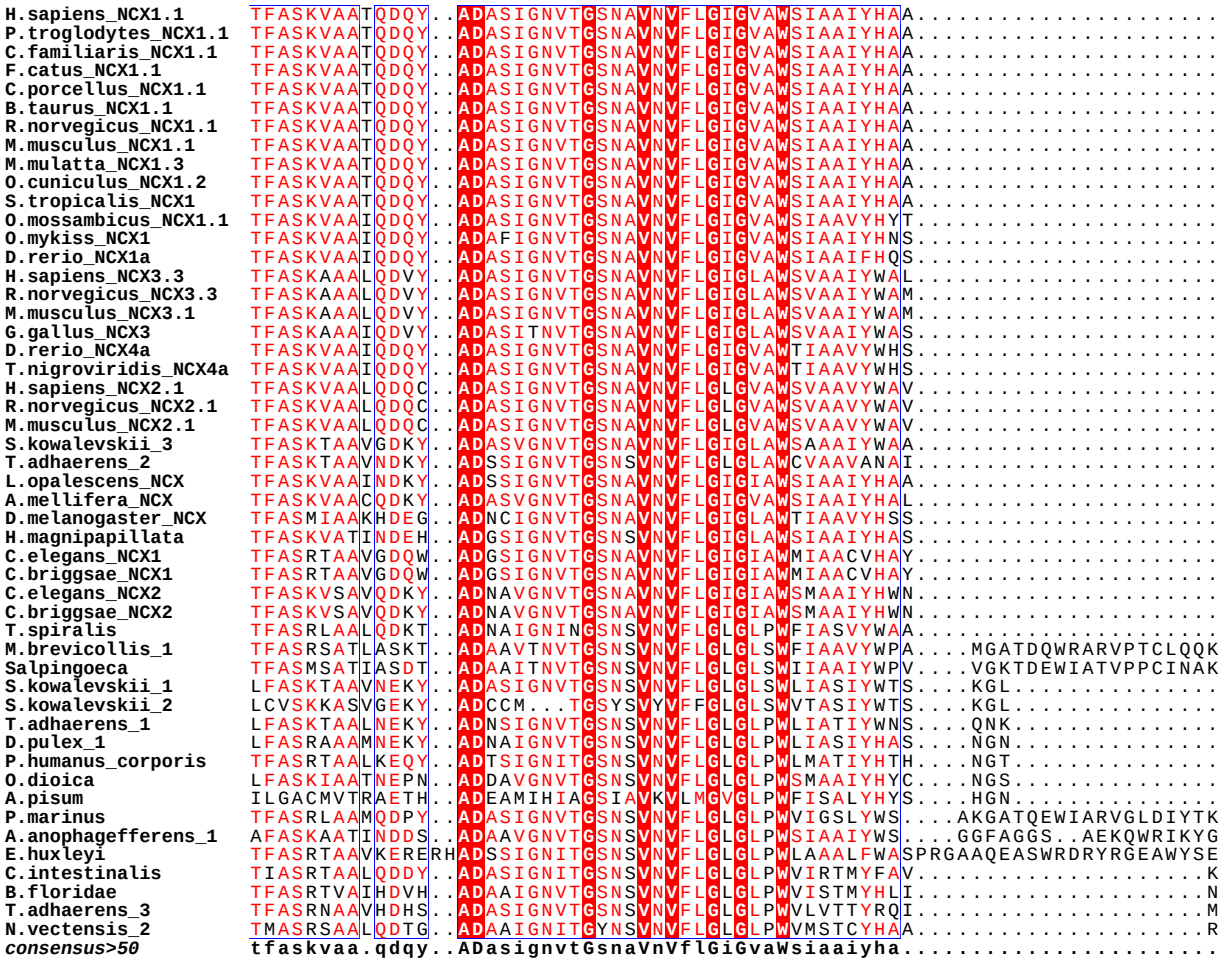
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C.porcellus_NCX1.1
B.taurus_NCX1.1
R.norvegicus_NCX1.1
M.musculus_NCX1.1
M.mulatta_NCX1.3
O.cuniculus_NCX1.2
S.tropicalis_NCX1
O.mossambicus_NCX1.1
O.mykiss_NCX1
D.rerio_NCX1a
H.sapiens_NCX3.3
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G.gallus_NCX3
D.rerio_NCX4a
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H.sapiens_NCX2.1
R.norvegicus_NCX2.1
M.musculus_NCX2.1
S.kowalevskii_3
T.adhaerens_2
L.opalescens_NCX
A.mellifera_NCX
D.melanogaster_NCX
H.magnipapillata
C.elegans_NCX1
C.briggsae_NCX1
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Salpingoeca
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D.pulex_1
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O.dioica
A.pisum
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C.intestinalis
B.floridae
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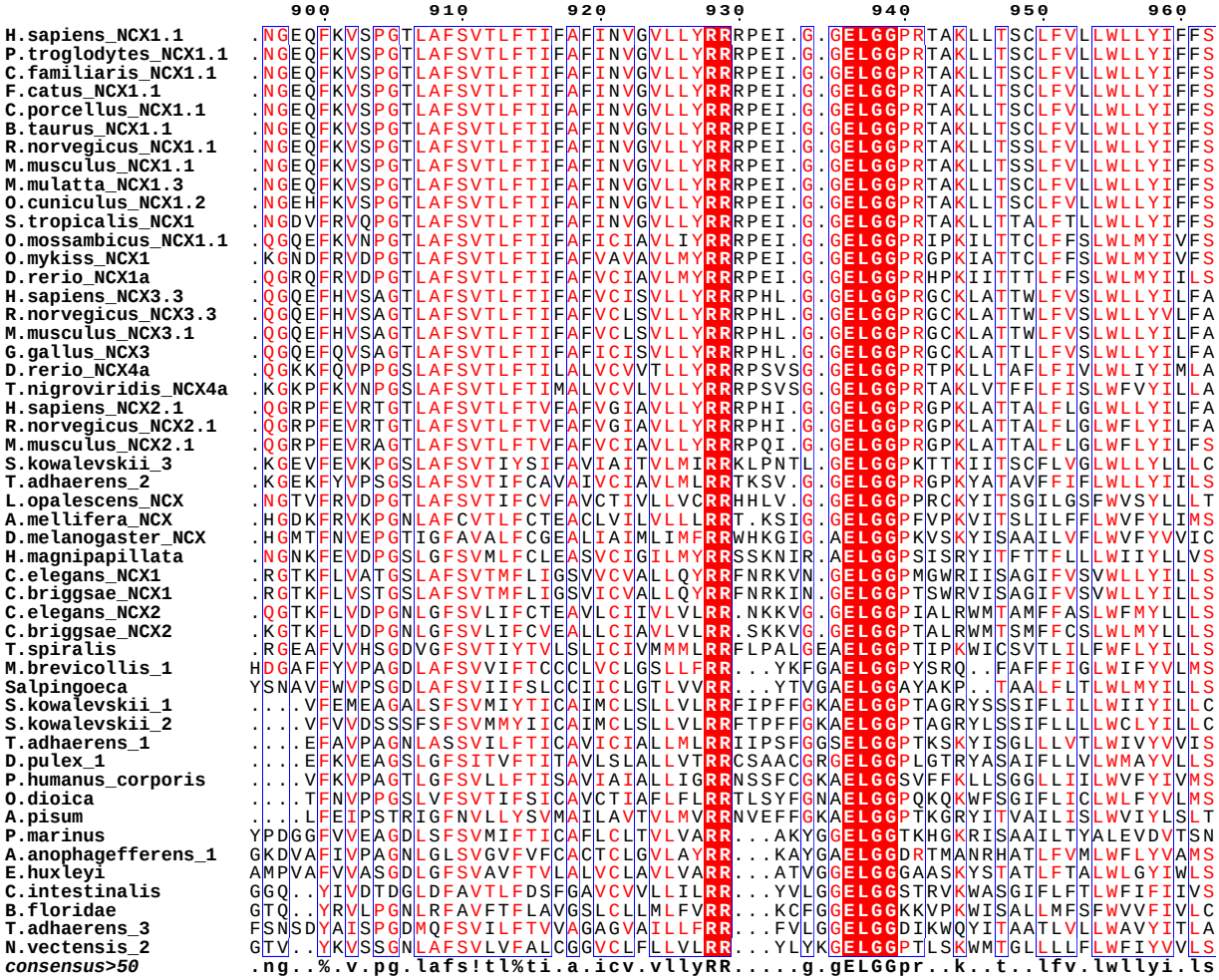
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R.norvegicus_NCX1.1
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M.mulatta_NCX1.3
O.cuniculus_NCX1.2
S.tropicalis_NCX1
O.mossambicus_NCX1.1
O.mykiss_NCX1
D.rerio_NCX1a
H.sapiens_NCX3.3
R.norvegicus_NCX3.3
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L.opalescens_NCX
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D.melanogaster_NCX
H.magnipapillata
C.elegans_NCX1
C.briggsae_NCX1
C.elegans_NCX2
C.briggsae_NCX2
T.spiralis
M.brevicollis_1
Salpingoeca
S.kowalevskii_1
S.kowalevskii_2
T.adhaerens_1
D.pulex_1
P.humanus_corporis
O.dioica
A.pisum
P.marinus
A.anophagefferens_1
E.huxleyi
C.intestinalis
B.floridae
T.adhaerens_3
N.vectensis_2
consensus>50

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P.troglodytes_NCX1.1            SLEAYCHIKGF................
C.familiaris_NCX1.1             SLEAYCHIKGF................
F.catus_NCX1.1                  SLEAYCHIKGF................
C.porcellus_NCX1.1              SLEAYCHIKGF................
B.taurus_NCX1.1                 SLEAYCHIKGF................
R.norvegicus_NCX1.1             SLEAYCHIKGF................
M.musculus_NCX1.1               SLEAYCHIKGF................
M.mulatta_NCX1.3                SLEAYCHIKGF................
O.cuniculus_NCX1.2              SLEAYCHIKGF................
S.tropicalis_NCX1               SLEAYCHIKGF................
O.mossambicus_NCX1.1            SLEAYCHVKGF................
O.mykiss_NCX1                   SLEAYCHVKGF................
D.rerio_NCX1a                   SMEAYCIIKGF................
H.sapiens_NCX3.3                TLEAYCYIKGF................
R.norvegicus_NCX3.3             TLEAYCYIKGF................
M.musculus_NCX3.1               TLEAYCYIKGF................
G.gallus_NCX3                   TLEAYCYIKGF................
D.rerio_NCX4a                   SLEAYCHVPGF................
T.nigroviridis_NCX4a            SLEAYCHVHSF................
H.sapiens_NCX2.1                SLEAYCHIRGF................
R.norvegicus_NCX2.1             SLEAYCHIRGF................
M.musculus_NCX2.1               SLEAYCHIRGF................
S.kowalevskii_3                 SFESYCYIEGF................
T.adhaerens_2                   SLESYCHIPGF................
L.opalescens_NCX                GLMSYCHIPGF................
A.mellifera_NCX                 ILEAYGYIEGF................
D.melanogaster_NCX              ILEAYDVIRV.................
H.magnipapillata                GLESYCYFTLKF...............
C.elegans_NCX1                  TLEAYCIIKGF................
C.briggsae_NCX1                 TLEAYCVIKGF................
C.elegans_NCX2                  ALEAYCIIPGF................
C.briggsae_NCX2                 ALEAYCIIPGF................
T.spiralis                      ALQAYGHISSF................
M.brevicollis_1                 SLQVEGYIASI................
Salpingoeca                     SLSTYEHISL.................
S.kowalevskii_1                 SLQAYGYIHF.................
S.kowalevskii_2                 SFQSYDYIDF.................
T.adhaerens_1                   SLQVYRIIPPIVKT.............
D.pulex_1                       SLETYGHITGF................
P.humanus_corporis              CLKEYRVIDVNF...............
O.dioica                        TLQAYEFIPGF................
A.pisum                         CFQPF......................
P.marinus                       GVALNSNLHLNYRDASDVDRGEY....
A.anophagefferens_1             ILASEGIV...................
E.huxleyi                       IAKTEGDPRLARLLQQLPPQARALLGA
C.intestinalis                  SLKAYNYF...................
B.floridae                      SLKAYDLLPF.................
T.adhaerens_3                   SLRAYDVIRFQ................
N.vectensis_2                   SLMAYGHISGSL...............
consensus>50                    sleayc.i.gf................
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