

Additional file 4

Amino acid sequences of Nox and Duox proteins

To describe sequences from different species, we used the following naming: human-Hs (as *H. sapiens*), cow-Bt (*B. taurus*), dog-Cf (*C. familiaris*), rat-Rn (*R. norvegicus*), mouse-Mm (*M. musculus*), chicken-Gg (*G. gallus*), opossum-Md (*M. domestica*), armadillo-Dn (*D. novemcinctus*), rabbit-Oc (*O. cuniculus*), frog-Xt (*X. tropicalis*), zebrafish-Dr (*D. rerio*), fugu-Tr (*T. rubripes*), tetraodon-Tn (*T. nigroviridis*), medaka-Ol (*O. latipes*), ascidian-Ci (*C. intestinalis*), sea urchin-Sp (*S. purpuratus*), fruit fly-Dm (*D. melanogaster*), mosquito-Ag (*A. gambiae*), mosquito-Ae (*A. aegypti*), honeybee-Am (*A. mellifera*), nematode-Ce (*C. elegans*), At (*A. thaliana*), amoeba-Dd (*D. discoideum*), fungus-Pa (*P. anserina*), fungus-An (*A. nidulans*), fungus-Mg (*M. grisea*), fungus-Fg (*F. graminearum*), alga-Cc (*C. crispus*) and alga-Py (*P. yezoensis*). Sequences are available from the indicated servers: <http://www.ncbi.nlm.nih.gov/> (GenBank™ numbering genes), <http://www.ddbj.nig.ac.jp/searches-e.html>. (DDBJ number gene) or <http://www.ensembl.org>. (ensembl numbering genes), and <http://flybase.net/> (FlyBase accession number sequences). Genome locations of vertebrate Nox genes are shown in Figure 3, and those of *C. intestinalis* genes are described herein, following accession numbers. The insertion containing 4 additional predicted transmembrane regions

(TM7-TM10) of the algal Nox orthologs that were trimmed prior to phylogenetic analyses is underlined.

> human-Hs-Nox1: GenBank™ accession No. NM_007052

MGNWVVNHWFVSVLFLVWVWGLNVFLFVDAFLKYEKADKYYYTRKILGSTLACARASALCLNFNST
LILLPVCRNLLSFLRGTCFSCSRTRLRKQLDHNLTFFHKLVAYMICLHTAIHIIAHLNFDCYSRSRQAT
DGSLASILSSLSHDEKKGGSWLNPIQSRNTTVEYVTFSTIAGLTGVIMTIALILMVTSATEFIRRSYFE
VFWYTHHLFIFYILGLGIHGIGGIVRGQTEESMNESHPRKCAESFEMWDDRDSDHCRRPKFEHPP
ESWKWILAPVILYICERILRFYRSQQKVVITKVVMMHPSKVLELQMNKRGFSMEVGQYIFVNCPSISL
LEWHPFTLTSAPEEDFFSIHRAAGDWTENLIRAFEQQYSPIPIEVDGPFGTASEDFVQYEVAVLVG
AGIGVTPFASILKSIWYKFQCADHNLKTKKIYFYWICRETGAFSWFNNLLTSLEQEMEELGKVGFL
NYRFLFTGWDSNIVGHAALNFDKATDIVTGLKQKTSFGRPMWDNEFSTIATSHPKSVVGVFLCGPR
TLAKSLRKCCCHRYSSLDPRKVQFYFNKENF

> mouse-Mm-Nox1: GenBank™ No. NM_172203

MGNWLVNHWLSVLFVSWLGLNIFLVVYAFLNYEKSDKYYYTREILGTALALARASALCLNFNSM
MILIPVCRNLLSFLRGTCFSCNRTLRLKPLDHNLTFFHKLVAYMICIFTVIHIIAHLNFERYRRSQAM
DGSLASVLSLSHPEKEDSWLNPIQSPNMTVMYAAFTSIAGLTGVVATVALVLMVTSAMEFIRRNYP
ELFWYTHHLFVYIICLGIHGLGGIVRGQTEESLGHESHPHNCSHSFHEWDDHKGSCRHPHFAGHPP
ESWKWILAPIAFYIFERILRFYRSQQKVVITKVVMMHPSNVLELQMRKRGFSMEVGQYIFVNCPSISF
LEWHPFTLTSAPEEEFFSVHRAAGDWTNRLRTFEQQHSPMPRIEVDGPFGTSEDVQYEVAVL
VGAGIGVTPFASILKSIWYKFQRADNKLKTQKIYFYWICRETGAFAWFNNLLNSLEQEMEELGKMD
FLNYRFLFTGWDSNIAGHAALNFDRTDILTGLKQKTSFGRPMWDNEFSRIATAHPSAVGVFLCG
PRTLAKSLRKRCQRYSSLDPRKVQFYFNKETF

> rat-Rn-Nox1: GenBank™ No. NM_053683

MGNWLVNHWLSVLFVSWLGLNIFLVVYVFLNYEKSDKYYYTREILGTALALARASALCLNFNSM
VILIPVCRNLLSFLRGTCFSCNHTLRKPLDHNLTFFHKLVAYMICIFTAIHIIAHLNFERYRSRQAM
DGSLASVLSLSLHPEKEDSWLNPIQSPNVTVMYAAFTSIAGLTGVVATVALVLMVTSAMEFIRRNYP
ELFWYTHHLFIIYIICLGIHGLGGIVRGQTEESMSHPRNCSYSFHEWDKYERSCRSPHFVGGPPE
SWKWILAPIAFYIFERILRFYRSRQKVVITKVVMMHPCKVLELQMRKRGFTMGIGQYIFVNCPSISFL
EWHPFTLTSAPEEEFFSIHRAAGDWTENLRTFEQQHSPMPRIEVDGPFGTSEDVQYEVAVLVG
AGIGVTPFASFLKSIWYKFQRAHNKLKTQKIYFYWICRETGAFAWFNNLLNSLEQEMDELGKPDFL
NYRFLFTGWDSNIAGHAALNFDRTDVLTLGLKQKTSFGRPMWDNEFSRIATAHPSVGVFLCGP
PTLAKSLRKCCRRYSSLDPRKVQFYFNKETF

> dog-Cf-Nox1: GenBank™ No. XM_549136

MGNWVVNHWFVSVLFLATWLGLNVFLFVHAFLSYEKADKYYYYTREILGSTLAWARASARCLNFNS
MLILLPVCRNLLSFLRGTCFRCRRTLRLKQLDHNLTFFHKLVAYMICLHTAIHIIAHLNFERYRSRQA
TDGSLASILSTLSHQKEEDSWLNPMQSPNMTVEYVTFSTIAGLTGVIITIALVLMVTSAMEFIRRSY
FEVFWYTHHIFIIYFIGLGIHGIGGIVRGQTEESLNESHPHRCAESFKQWDDHDSHCKHPRFEGPLA
ESWKWILAPGVLYILERILRFYRSQQKVVTIKVVMHPSKVLELQMIKRGFSMEVGQYIFVNCPSVSY
LEWHPFTLTSAPPEEDFFSVHIRAVGDWTENLIRAFEQQCSPIPRIEVDGPFGTVSEDVFQYEVVVLV
GAGIGVTPFASILKSIWYKFRHEDHNLKTQTIYFYWICRETGAFAWFNDLLASLECEMEELGKVDF
LNYRFLFTGWDSNIASHATLNFDKATDILTGLKQKTSFGRPMWDNEFSTIANAHPRSVVGVFLCGP
QTLAKSLKCCCQYSSLDPRKVQFYFNKENF

> chicken-Gg-Nox1: DDBJ™ No. BR000265

MGNWLVNHWFSAAVLAAWLGINIFLFTYYFLFFDRDERYFYTRAILGSALAWARASAKCLNFNSML
ILLPVCRNLLSFLRGSFSCCRRTLRLKQLDHNLTFFHKLVAALALLTAVHTIAHLNLERYNHSQQAN
DGS LHAVLSKMHLQDSNKWLNPIHSNQTTVEYVAFTTIPGLTGVIITLALILMVTSSTEFIRRNIFEV
FWYTHHLFIIYFIGLVIHGAVGLVRGQTEESMKEVHPQSCAEFLVNKSKECRHQCCKEPEFGSIPAE
VGMGVGLQESRLLHTPGCCXSSHTGTLPASQVVMHPAKVLELQMCKKGRMEVGQYIFVNCPAV
SLEWHPFTLTSAPPEEDFFSIHIRAAGDWTEHIIDTFQQQKLEMPRIKVDGPFGTASEDVFLYEAM
LVGAGIGVTPFASILKSIWYRFQQNDQTLKTKKIYFYWLCRDTGAFTWFNDLLASLEQKMAESGKA
DFTYRFLFTGWDTSIANNAALHFDTVTDVTGLRQKTIFGRPRWDTEFSAVATAHPRSVVGVFLC
GPEALAKVLRRSCHQHSSLDPRKVQFYFNKENF

> frog-Xt-Nox1: Ensembl No. ENSXETP00000021243

MGNWIANNWFVSVVVLATWLGLNIFIFINFFMIFEKGDSSYSYTRELLGSALAWARGSAACLNFNCLL
ILLPVCRNLLSFLRGTCCTCVQRSMRKQLDNLAFHKLVGTYIALMTAIIHTIAHLNVERYCDAAQK
KTDTLPGELSSIGEDGTWLNVPVRSPTVTPPYFAFTTIAGLTGVVITLALILMITSSTEFIRRCYFEVFW
YTHHLFVIFFIGLVFHGAGRIVRGQTSDSMETNNEYEKCHNSFTQWQNSKSSNRDDDDHHNDKCT
VPAFQGNPEGVRYKLMYFETRQKRKTHAIKPNHTTMGHPSKVLEIQMQKRGFKMEVGQYIFINC
PSVSALEWHPFTLTSAPPEEDCFVHIRSAGDWTDNLIKVFQEQAENPPRLEVDGPFGTASEDVVFQY
EVSMLVGAGIGVTPFASILKSIWYKFQRDDQRLKTKKIYFYWICRETGSFAWFADLLRSLEQEMICS
GKDGFLNYRFLFTSWDSKIAGHVVIDFDHATDVTGLRQKTSYGRPIWENEFKVAEWHPKSTVG
VFLCGPQALGKTLKQCCHQYSSLDPRKVQFYFNKENF

> tetraodon-Tn-Nox1: DDBJ™ No. BR000267

MGNWIVNHGLTSFILVVMGINIFLVWFYLFYDLGDQFFYTRHLLGSALAWARAPAAVLNFNCM
LILLPVCRNLLSLLRGSFVCCGRSMRKQLDKNLSFHKLVAYMIALMTAVHTVAHLLNVEWYNNRQ
GVYDELSTALSKLDDANGTTYLNPIRITDLIPTYFAFTTIAGLTGVIITLSLILITSSMEVIRRSYFEV
WYTHHLFIIFFAGLVFHGAGRIVRSQQTTNPPHNTSYCKDHPDDWGHIPCEPIPFAGGFPQWTM
WVIAPMFLYVCERLIRFVRYMQTVRYRRIVMRPSKVLELQLVKSGFKMEVGQYVFLNCPAISQLEW
HPFTMTSAPEEDFFSVHIRSAGDWTDKLIDIMQKLPEGAQGPCKMGVDGPFGTASEDVFDYEVSM

VGAGIGVTPFASILKSIWYKFKESNPCLRTRKIIFYWLCRETHAFEFWFADLLQVLEKEMDERGMG
DFLTYKLYLTKWDQSHADHIMVHSDQDIDVVTGLRQKTYTGRPAWDKEFEQVRKENPTS SVVGTFL
CGPEALAEVLEKKCVKYSDVDPRKTKFYFNKENF

> zebrafish-Dr-Nox1: DDBJ™ No. BR000266

MGNWIINHGLSAFIVVWMAINIALFVHFYLFYDQGERFEYTRELLGSALAWARAPAAVLNFCML
ILLPVCRNLLSLRGSFVCCGRTVRKQLDKNLTFHKLVAIYALMTAVHTIAHLFNAERYNSLEGE
DGDALAFELSLLDSSSELNTTYLNPFPNSSTTPMIFVFTSIAGLTGVVITLALILMITSSMEVIRRSYFE
VFWYTHHLFIVFFAGLVFVHGAGRVRGQVTTDPPHNNSFCEDQPDNWGKIPECPIQFAGGSPQT
WMYVIGPMIYICERLLRFIRYMQPVTYRKIVIRPSKVLELQLVKPGFSMDVGQYVFLNCPAISQLEW
HPFTLTSAPPEEDFFSVHIRSVGDWTEKLLKVENLPEGGQGPKYVLLWIFTITSRMGVDGPFGTAS
EDVFHYEVSMLVGAGIGVTPFASILKSIWYKFKSDPKLRTRKIIFYWLCRETHAFEFWFADLLQVL
EREMEERGMRDFLTYKLYLTKWDQSHADHAMVHFDKDTDIITGLKQKTHYGRPNWDKEFEQVR
QENPSSVVGTFCLCGPQALAKDLEKKCVKYSDVDPRRTKPHYFNKENF

> medaka-Ol-Nox1: Ensembl No. ENSORLP0000001741

MANWIINNGFPAVMVLVWMTINTFLVWYLYQYDRDDDFYYTRHLLGSALAWARAPAAVLNFCML
LILLPVCRNLLSLRGSFVCCSRTMRKQLDKNLSFHKLVAIYALMTAVHTVAHLLNLEWLNNL
GVYGLSTALSNEDEGNETFLNPLQHIEADPQQKPIKFAFTSIAGLTGVVITLALILITSSMEVIR
SYFEVFWYIHLFIVFFVGLVFGHYGRIVRSQFNTDDHNATFCKDRPDDWGKIPECPIQFQGGEP
MTWKWVIGPMIYVCERVLRFIRYMQAVQYRKIVIHPSKVLELQLRKKGFKMEVGQYVFLNCP
QLEWHPFMTSAPEEDFFSVHIRSAGDWTDLIDTMQKLPEGAQGPKMVGDPFGTASEDVF
EVSMLVGAGIGVTPFASIMKSIWYKFKECDPKLRTRKIIFYWLCRETNAFEWFADLLQVLEKEMEE
RNLGDFLTYKLYLTKWDQGHDTQVIVHFDDEDTDVVTGLKQKTHYGRPNWDKEFDQVRKENPAS
VGTFLCGPAALAKVLQKKCAKYSDVDPRKTKPHYFNKENF

> fugu-Tr-Nox1: DDBJ™ No. BR000268

MGNWIINHGLTAFILVWVWGINIFLVWFYLFYDLGERFFYTRHLLGSALAWARAPAAVLNFCML
ILLPVCRNLLSLRGSFVCCGRSMRKQLDKNLSFHKLVAIYALMTAVHMAHLLNVEWYNNRSRQ
GVYDKLSTALSNEDETKNTTYLNPISPTLSTYFVFTTIAGLTGVVITLALILITSSMEVIRRSYFEV
WYTHHLFIFFAGLVFVHGAGRIVRSQNSEPAHDATFCKDRTEDWGKIPECPIQFSGGFPQTM
GPMVLYLCERLIRFIRYMQTVRYRKIVMRPSKVLELQLMKRGFKMEVGQYVFLNCPAISQLEW
HPFTLTSAPPEEDFFSVHIRSAGDWTDLKIEIMQQLPEGAQGPKMVGDPFGTASEDVF
DYEVSMVVGAGIGVTPFASILKSIWYKFKESNPCLRTRKIIFYWLCRETHAFEFWFADLLQVLEKEM
DERGMVDFLT YKLYLTKWDDGHVNHKIVYPTDMDVMTGLRQQNTNYGRPNWDKEFEQVRKENPTS
SVVGTFLCGPEALAEVLEKKCVKYSDVDPRKTKPHYFNKENF

> human-Hs-Nox2: GenBank™ No. NM_000397

MGNWAVNEGLSIFVILVWLGLNVFLVWYRVDIPPKFFYTRKLLGSALALARAPAAVLNFCML
ILLPVCRNLLSLRGSFVCCSTRVRRQLDRNLTFFHKMVAIYALHSAIHTIAHLFNVEWCVNARVN

NSDPYSVALSELGDRQNESYLNFAKRIKNPEGGLYLAVTLLAGITGVVITLCLILIITSSTKTIRRSYF
EVFWYTHHLFVIFFIGLAIHGAERIVRGQTAESLAVHNITVCEQKISEWKGKICEPIQFAGNPPMT
WKWIVGPMFLYLCELRVRFWRSQQKVVITKVVTHPFTKIELQMKKKGFKMEVGQYIFVKCPKVS
LEWHPFTLTSAPPEEDFFSIHIRIVGDWTEGLFNACGCDKQEFQDAWKLPKIAVDGPFGTASEDVFS
YEVVMLVGAGIGVTPFASILKSVWYKYCNNATNLKLLKKIYFYWLCRDTHAFEFADLLQLLESQM
QERNNAGFLSYNIYLTGWDESQANHFVHHDEEKDVITGLKQKTLYGRPNWDNEFKTIASQHPNT
RIGVFLCGPEALAEATLSKQSSISNSESGPRGVHFIFNKENF

> mouse-Mm-Nox2: GenBank™ No. NM_007807

MGNWAVNEGLSIFVILVWLGLNVFLFINYYKVYDDGPKYNYTRKLLGSALALARAPAAACLNFCM
LILLPVCRNLLSFLRGSSACCSTRIRRLDRNLTFHKMVAWMIALHTAIHTIAHLFNVEWCVNARVG
ISDRYSIALSDIGDNENEEYLNFAREKIKNPEGGLYVAVTRLAGITGIVITLCLILIITSSTKTIRRSYFE
VFWYTHHLFVIFFIGLAIHGAERIVRGQTAESLEEHNLDICADKIEEWGKICEPVPKIFAGNPPMT
WKWIVGPMFLYLCELRVRFWRSQQKVVITKVVTHPFTKIELQMKKKGFKMEVGQYIFVKCPKVS
LEWHPFTLTSAPPEEDFFSIHIRIVGDWTEGLFNACGCDKQEFQDAWKLPKIAVDGPFGTASEDVFS
YEVVMLVGAGIGVTPFASILKSVWYKYCDNATSLKLLKKIYFYWLCRDTHAFEFADLLQLLETQM
QERNNANFLSYNIYLTGWDESQANHFVHHDEEKDVITGLKQKTLYGRPNWDNEFKTIASEHPNT
TIGVFLCGPEALAEATLSKQSSISNSESGPRGVHFIFNKENF

> rat-Rn-Nox2: GenBank™ No. NM_023965

MGNWAVNEGLSIFVILVWLGLNVFLFVKYYKVYDDEPKYNYTRKLLGSALALARAPAAACLNFCM
LILLPVCRNLLSFLRGSSACCSTRIRRLDRNLTFHKMVAWMIALHTAIHTIAHLFNVEWCVNARVG
TSDPYSVALSNIGDKENEEYLNFAREKIKNPEGGLYVAVTRLAGITGIVITLCLILIITSSTKTIRRSYF
EVFWYTHHLFVIFFIGLAIHGAERIVRGQTSDSLKEHNLDVCADKIKEWGKICEPVPKIFAGNPPM
TWKWIVGPMFLYLCELRVRFWRSQQKVVITKVVTHPFTKIELQMKKKGFKMEVGQYIFVKCPQVS
KLEWHPFTLTSAPPEEDFFSIHIRIVGDWTEGLFNACGCDKQEFQDAWKLPKIAVDGPFGTASEDVFS
SYEVVMLVGAGIGVTPFASILKSVWYKYCDNATSLRLKKIYFYWLCRDTHAFEFADLLQLLETQMQ
ERNNANFLSYNIYLTGWDESQANHFVHHDEEKDVITGLKQKTLYGRPNWDNEFKTIASQHPNTR
IGVFLCGPEALAKTLSKQSSISNSESGPRGVHFIFNKENF

> dog-Cf-Nox2: DDBJ™ No. BR000269

MGNWIENEGLSIFVILVWLGLNVFLFIWFYGVYNNGEFFYTRKLLGFALPLARAPAAACLNFCML
ILLPVCRNLLSFLRGSSACCSTRIRRLDRNLTFHKLVAWMIALHTAIHTIAHLFNVEWCVNARVNN
SDVYSIALSNLGDNPGESYLNFAARRIKNPEGGLYVAVTLLAGITGIVITLCLILIITSSTKTIRRSYFEV
FWYTHHLFVIFFIGLAIHGAERIVRGQTAASRLEHNYKVCADNISQWGKIPDCPIQFSGNPPMTW
KWIVGPMFLYLCELRVRFWRSQQKVVITKVVTHPFTKIELQMKKKGFKMEVGQYIFVKCPKVS
EWHPFTLTSAPPEEDFFSIHIRIVGDWTEGLFNACGCDKQEFQDAWKLPKIAVDGPFGTASEDVFSY
EVVMLVGAGIGVTPFASILKSVWYKYCNNATNLRLKKIYFYWLCRDTHAFEFADLLQLLETQMQ
ERNNAGFLSYNIYLTGWDESQANHFVHHDEEKDVITGLKQKTLYGRPNWDNEFKTIASQHPNTR

IGVFLLCGPEALAETLSKQCISNSESGPRGVHFIFNKENF

> chicken-Gg-Nox2: DDBJ™ No. BR000270

MGNWVENEGLSIFVVLVWLGLNVFLFWWFYLAYDLPQNFYTRVLLGRALALARAPAAACLNFNCLL
MLILLPVCRNLLSFLRGSSACCSTRVRRQLDRNLTFHKMVAWMIALHTAIHTIAHLFNVEWSVHAR
VEEEGTAAVLSRLGDSFNESYINFYRQTIPNPVGGLYVAFTYLAGLTGVITLALILITSSSTKIIRRSY
FEVFWYTHHLFVIFFIGLVIHGAGRIVRGQTAVSLAEHIPEVCSKNFTDWGKKGACVPPQFAGNPP
MTWKWVVGPMFLYFCERLVRFRWSQQKVVITKVVVHPFKTIELQMMKKGFKMEVGQYIFVKCPAVS
SKLEWHPFTLTSAPEDYFSIHVRIVGDWTEGLFNACGCDKQEFQEAWKLPKIAVDGPFGTASEDVF
FSYETVMLVGAGIGVTPFASVLKSVWYKYCHDATNLKLLKIIYFYWLCRDTAFEFWFADLLQSLET
QMQRNNAEFLSYNIYLTGWDETQATHFVMHHEEEKDVTGLKQKTLYGRPNWENEFKTIARQH
PGSRIGVFLCGPEGLADTLNKQSSISNSEADPRGVHFIFNKENF

> frog-Xt-Nox2: GenBank™ No. NM_001030518

MGNWIVNEGLSIAVHIVWLGLNGYLFWNFYLVYDEGEKYFYSRKLYGSALAWARAPAAACLNFNCLL
ILLPVCRNLLSFLRGSSACCGRSLRRQLDRNLTFHKMVAWMIALHTAIHTGAHLFNVERLVDARVE
ANGTIQAALTDLDREGESEYLNFRVSRVNPPIGGINVAFTFLAGLTGVVITLALILITSSSTKTIRRSYF
EVFWYTHHLFVIFFIGLVIHGAGKIVRGQTDKSLEKHNSTECEDKFTWGNITSCPIPPQFAGNEPM
TWKVVVAPMVLYVFERLVRFRWSQQKVVITKVVVTHPFKTIELQMKMKGFKMEVGQYIFVQCPAVS
KLEWHPFTLTSAPEDFFSIHIRIVGDWTEGLFKACGCDKTEFQDAWKMPKIAVDGPFGTASEDVF
SYEVAMLVGAGIGVTPFASVLKSVWYRYVNDASTLRLKIIYFYWLCRDTQAFEFWFADLLQSLETQM
QERDNANFLVYNIYLTGWDESQATAFSLHHDQEKDVTGLKQKTLYGRPNWENEFKTIANAHNTSS
RVGVFLCGPESLAETLNKQSIANSTVDPRGVHFIFNKENF

> tetraodon-Tn-Nox2: DDBJ™ No. BR000271

MGNFAANEGLSVFVILVWLGINAFLVHFYMAFLVERWFYTRVLLGHALSWARAPAAACLNFNCLL
ILLPVCRNLLSFLRGSIQCCSRTAARQLDRNLTFHKLVAVMIAFHTAVHIVAHLNFEEFFMDAQLNR
NSSYLPFILSEIGTGDNASFLNPIRTNETNPTIVMFTTIAGLTGVAITLALILITSSMEVIRRSYFEV
WYTHHLFVIFFIGLVLHGFGRIVRGQTAASLTKNKEVCADRFEWGRNGSDCAVPEFAGNPPMT
WKWVVGPMILYVCERIVRFYRSHQKVVITKVVVHPSKTLELRMKRKGFKHMEVGQYVFIQCPSVSR
LEWHPFTLTSAPEDYFSAHIRIVGDWTQALYEACGGDRSEPPQEAWKLPKVAIDGPFGTASEDVF
YEVVMLVGAGIGVTPFASILKSVWYKHIQKNQEVFTKKIYFYWLCPETEAFEFWFADLLQSLEGQMA
DKGMTDFLSYNIYLTWKEKEAAHFRVHHEAENDPITGLKQKTLYGKPNWDHEFASIASQHPRSK
VGVFLCGPPKLGQSLQKQCLSYSGADVFKIFNKENF

> fugu-Tr-Nox2: GenBank™ No. AB099894

MGNFAANEGLSTFVILVWLGINAFLVHFYMAFLVDRWFYTRVLLGHALSWARAPAAACLNFNCLL
ILLPVCRNLLSFLRGSIQCCSRTAARQLDRNITFHKLVAYMIAFHTAVHIVAHLNFEEFFMDAQLNR
NSSYLPFILSEIGTGDNASFLNPIRTNETNPTIVMFTTIAGLTGVAITLALILITSSMEVIRRSYFEV
WYTHHLFIIFFIGLVLHGFGRIVRGQTPASLKSNDPTVCADQFEDWGRNGSNCAVPEFAGNPPMTW

KWVVGPMLYVLCERLVRFYRSHQKVVITKVVMMHPSKTLELQMKRKGFRMEVGQYVFIQCPSVSRL
EWHPFTLTSAPPEEDYFSAHIRIVGDWTQALYEACGGDKSEPQEAWKLPKVAIDGPFGTASEDVFRY
EVMMLVGAGIGVTPFASILKSVWYKHIQNNQEVFTKKIYFYWLCPETEAFEFWFADLLQSLEGQMTE
KGMTDFLSYNIYLTRWKEKEAAHFRVHHEAENDPITGLKQKTLYGKPNWDNEFTNIASKHPGSKV
GVFLCGPPQLGKSLQKQCLSHSEADV KFIFNKENF

>zebrafish-Dr-Nox2: GenBank™ No. NM_200414.1

MGNFAANEGLSVFVILVWLGINVFLFVYFYLAFLIDKYYYTRVILGHALSWARAPAAACLNFCMLIL
LPVCRNLLSFLRGSIQCCSRTAARQLDRNITFHKLVAYMIAFHTAVHIIAHLNFERFMDSQLMINSS
HLPYVLSQIGNNDNRSYLNPIRSNDTNPTIVMFTTVAGLTGVVITLALILITSSMEVIRRSYFEVFWF
THHLFIVFFIGLVLHGIGRIVRGQTDADLQVHDPTICHSKFEKWGNVTDCPVPIFAGNPPKTWKW
VVGPMFLYVLCERLVRFYRSQQKVVITKVVTHPSKTLELQMKKKGFKMEVGQYIFMMCPSISQLEW
HPFTLTSAPPEEDHFSVHIRIVGDWTQALYSACGGDKTAVLDAWTLPKMAVDGPFGTASEDVFRYEA
VMLVGAGIGVTPFASVLKSVWYKHVQENQNVFTKKIYFYWLCPETQAFEFWFADLLQSLEKQMSDK
NMSDFLSYNIYLTRWKDAEAAHLRVQYEAEDDPITGLKQKTRYGKPNWDNEFSLIASQHPGTKVG
VFLCGPTALGKALSKQCLSHTEGGTEFIFNKENF

>medaka-Ol-Nox2: Ensembl No. ENSORLP00000002049

MGNFVANEGLSIFVILVWLGINAYLVQFYMNFLVERWFYTRVLLGHALSWARAPAAACLNFCMLI
LLPVCRNLLSFLRGSIQCCSRTAARQLDRNLTFHKLVAYMIAFHTAVHIIAHLNFEYFMDAQLNRN
HSHLPFILSEIGNDENVSFLNPIRSNETKSPTIVMFTTIAGLTGVVITLALILITSSMEVIRRSYFEV
WYTHHLFVIFFIGLVFVHGFGRIVRGQTSRSLSDNDPDVCA DRFEDWGKNESGCAVPAFAGNPPMT
WKWVVGPMLYVLCERLVRIRYRSHQKVVITKVVMMHPSKTLELQMKKKGFHMEVGQYVFIQCPSISR
LEWHPFTLTSAPPEEDYFVSVHVRIVGDWTQALYEACGGNKSELQEAWKLPKVAIDGPFGTASEDVFR
YEVVMLVGAGIGVTPFASILKSVWYKHIQNNQEVFTKKVRYIRLLRMSSSYLLFTLMVQKKIIRAWD
RHRGNWLATPVARFGQLKNQAAHLRVHHEDENDPITGLKQKTLYGKPNWDNEFTNIASHPGSK
VGVFLCGPPMLGKSLEKESISHTEAGVKFIFNKENF

>ascidian-Ci-Nox2: DDBJ™ No. BR000272 (Chromosome 6q: 1.91 M)

MNARLNGFLVNEFPKYIVFLLWLGFLNGFLFGYYNFFYNTKKTFFYTRVLLGPALALARAPAAACLN
NCLLVLLPVCRNLLSLFRKACMCCPRRIRRVLDKNIKFHRMCAYMIVLMTLIHYFAHCFNVDFFTS
AYQSKILATDTPAIQKQKLIKLIQIGNNGNETYLNPIRKS VFSVGAVFLTGGWTGVITLSLFFMV
TSSLEFIRRSYFEVFWFTHHLFIVFYGFLVHGHISMQVRGQTPQSLTVHDPIRCSTIDPATWSQNNC
PTPVFAGSPPM TWKVVIA PMVLYVIERIIRLVRFNQQVEVLKVIKHPSRVLEIQMRKNGFFAEVGGY
VFIMCPQLSLEWHPFTLTSAPPEEDYFSIHVRIVGDWTTGLSKVLGADEAGNEVQPSWKMPRLAID
GPFGTASEDVFNYPVAICVGSIGVTPFASLLKSVWYKNLNPEHEMVLKKVYFFWICPETHAFEFW
GDLLKYLERQLTEIGRQDLIEYHIYLRGWDHKQAKAIYAHEEDTHDVITGLEQKTNYGRPNWDEI
FSKTARDYPNTHIGVFFCGVAALS AKLHKMSNKHSGGGVYFHYNKENF

>sea urchin-Sp-Nox2A: GenBank™ No. AY704915 (initially termed Nox-U1)

MGDKFLNEGLKYFFLLWLAANVAYWVVTFLVYEQGPQYFYIRRITGVGLSIKAAGAALNLSMII
LLPICRNLISFFRGSCATNTLCRRSVRRQLDKNLTFHKT VAYMIVVWTIVHVVAHAFNFRNLNHYR
CVTTDNDELCEGISAIGRKFKA KPEDNWL NPIQGAKTLPAGLGLIEQALIPIAGW SGAVLTLALILM
FSSATEFIRRSYFETFWITHHLFIVYFAMLLAHGVGGIIRSQTNLDRHDVVFCSENLDVWGPTSAQC
EDPVFKDGSAAASYKWVSGPLFIYLLERTIRFWRSCQTVTLTKVVKHQSKVIELQMKKKGFKMEAG
QYIFLKCP SISHVQWHPFTLTSAPEEDHFSVHIRVVDWTRDLFKAMGADKPEQQSQDELARVAVD
GPFGTASIDIFKYQVAICVGAGIGVTPFASILKSIWLKSVNNSASLKLK VYFFWICPDTNAFEWFST
LLDSIDTHFTEQKPDFLKYIYLSRGWNNTQAKNIYLQEEQEIDAITGLRQKTHYGRPKWDSNFK
MIAEENPGRVSSVFFCGPKALSSVLHENANKFTSLTPDGAKFFYNKENF

>sea urchin-Sp-Nox2B: GenBank™ No. XM_001180659

AAWAIVNLIHWLVTFKYM DNANYIYTKYLMKNGLPVARASAA CLNFNSMLILFPVCRNMISYLRGS
CESTKFSRRNLRRQLDKNITFHKLIAAIGFFVILHVGAHCFNLQNL YNGRKATSEDDWLANRLSQ
PSFDLNPFKTIRSSDVSGLVIGPGLSLLAGWTGAVLALTYILMFTSATEFIRYYFETFWLTHHLFVI
YYAMLMTHGMGGVVKYQTNVDEHDPVECMVDEETF DQCVIDNPPLFAGTPGASWKWCVTPLCV
YFLERILRMIRTWPDVTIVQVQH QSKVIELRMKKQGFKMLPGQYIFLKCSISKVQWHPFTLTSAP
EEDYFSLHIRVGDWTEDELAVKMGADQAEPLSITQLPRVQVDGPFGT SCTDIFDYDVVMCVSAGIG
VTPYASTLKSIWISSRQNFCTLHLKRMFYFYWICRDTHAFEFVVELLSLELILRQIDKEHLLSYSIYL
TRGWDTYQAKNIFMQEDREIDAVTGLRQKTHYGRPKWDSNFSYIAEKNPRVSRIWNATIGVFFCGP
KSLSTILHQSCNKHTSDESDGTRFVYYKENF

> human-Hs-Nox3: GenBank™ No. NM_015718

MMGCWILNEGLSTILVLSWLGINFYLFIDTFYWYEEEE SFHYTRVILGSTLAWARASALCLNFNCM
LILIPVSRNLISFIRGTSICCRGPWRRQLDKNLRFHKL VAYGIAVNATIHI VAHFFNLERYHWSQSEEA
QGLLAALS KLGNTPNESYLN PVRTFPTNTTTELLRTIAGVTGLVISLALV LIMTSSTEFIRQASYELF
WYTHHV FIVFFLSLAIHGTGRIVRGQTQDSL SLHNITFCRDRYA EWQTVAQCPVPQFSGKEPSAWK
WILGPVVLYACERIIRFWRFQQEVVITKVVSHPSGVLELHMKKRGFKMAPGQYILVQCPAISSLEWH
PFTLTSAPQEDFFSVHIRAAGDWTAALLEAFGAEGQALQEPW SLPRLAVDGPFGTALTDVFHY PVC
VCVAAGIGVTPFAALLKSIWYKCSEAQTPLKLSKVYFYWICRDARAFEFWADLLLSLETRMSEQGK
THFLSYHIFLTGW DENQALHIALHWDENTDVITGLKQKTFYGRPNWNNEFKQIAYNHPSSSIGVFF
CGPKALSRTLQKMCHLYSSADPRGVHFYFNKESF

> mouse-Mm-Nox3: GenBank™ No. AY573240

MPVCWILNESGSFVALLWLA VNAYLFIDTFFWYTEEEAFFYTRVILGSALAWARASAVCLNFNCML
ILLPVSRNFISLVRGTSVCCRGPWRRQLDKNLNFHKL VAYGIAVNSVIHIVAH LFNLERYHLGQAKD
AEGLLAALS KLGDAPNESYLN PVRTFDMGTTTELLMTVSGITGLGISLALVFIMTSSTEFIRRSSYEL
FWYTHHIFVFFFISLAIHGGGRIIRGQTPE SLRLHNVTYCRDHYA EWQAAALCPVPQFSGKEPSAW
KWALGPVVLYACERIIRFWRSHQEVVITKVVSHPSAVLELHMKKRDFKMAPGQYIFIQCP SVSPLE
WHPFTLTSAPQEDFFSVHIRASGDWTEALLKA FRVEGQAPSELCSMPRLAVDGPFGGSLADVFHY P

VSVCIATGIGVTPFASLLKSVWYKCCESQSLPELSKVYFYWICRDAGAFEFWADLLLSLETRMSEQG
KAHLLSYHIYLTGW DENQAIHIALHWDES LDVITGLKQKAFYGRPNWNDEFKQIAYNHPSSSIGVF
FCGSKAMSKTLQKMCRLYSSVDPRGVHFYFNKENF

>dog-Cf-Nox3: DDBJ™ No. BR000273

MMGCWILNESLSVILVLSWLGVNLYLFIDTFCWYEEEEESFLYTRVILGSTLAWARASAVCLNFCML
ILLPISRNLISFMRGTSTCCRGLWRRQLDKNLKFHKLVAVGIAVNATIHIHAHLNLRQYHWSQSAE
VQGLPATLSKLG NAPNESYLNPIRTFHTNTITELLTTIAGVTGLIISLALVIMTSSTESIRQVSYELF
WYTHHVFIIFFIGLAIHGAGRIVRGQTPESQLLHNVTFCRDHHAQWQKMAQCPMPQFSGKEPSAW
KWVLGPVVLYACERIIRFWRFQQEVVITKVVSHPSGVLELHMKKRNFKMAPGQYILVQCPSISWLE
WHPFTLTSAPQEDFFSLHIRVAGDWTEALWKAFGAEGQALKEPWSLPR LAVDGPFGTTLTDVFHY
PVSVCIAAGIGVTPFASLLKSIWYKCESQTLKLSKVYFYWICRDPKAFEFWADLLLSLETLM SERG
KAHFLSYHIFLTSW DENQAVHIALHW DENTDVVTGLKQKTFYGRPNWSNEFRQLAYAH PSSSIGV
FFCGPKALS KTLQRMCHLYSSADPRGVHFYFNKESF

>chicken-Gg-Nox3: GenBank™ No. XM_426166.1

MACWILNEKLSVLLLLVWLG LNLYLFIDTFHWYED EDAYVYTRIMLGSTLAWARASATCLNFCML
ILLPVSRNLISFLRGASACCGAPRRQLDKNIAFHKVVAYGIAVNATIHIHAHLINIERYHNSQSKEAG
GLQNKLSGLGKRPNESYLNPIRTYETNTTGEVLTTIAGVTGVMITVAFVLIVTSSTELIRRSCYEVFW
YTHHLFVVFVFIGLIHGTGQLVRGQTPHSLLLHNITYCKEHYLEWEKATQCPLPQFSGNKPVAVKW
VVSPVVLYICERIVRFWRWFQQEVVITKVVTHSSGVLELHMKKHGFKMEAGQYIFLQCTSISPLEWH
PFTLTSAP EEDFFSVHIRVAGDWTAALFKAFGAEEKTFKELWMLPRLVVDGPYGSATTDVFHYGVS
VCIAAGIGVTPFASILKSIWYKSCNPNTVLVLQKVYFYWICRDPSTFEWFADLLFLETMVEKGKN
DFLSYHIFLTGW DENQATHIALHYDEKMDVITGLRQKTFYGRPNWDSEFKQLAENHPSNSIGVFF
CGPKNLSKILQKMCSSYSTVDPRGVQFHYNEESF

>rat-Rn-Nox3: GenBank™ No. NM_001004216

MPTCWILNESVSFV VALLWLAINIYLFIDTFCWYAE EESFFYTRVILGSALAWARASAVCLNFCMLI
LLPVSRNFVSLVRGTSVCCRGPWRRQLDKNLKFHKLVAVGIAVNSVIHIHAHLNLRERYHLGQAKD
AEGLLAALS KLG NAPNESYLNPIVVRTLYTGTTTQLLMTVSGITGLVISLALILIMTSSTEFIRQSSYELF
WYTHHIFIFL FISLAIHG GRIIRGQTPESLRLHNVTFCRDHFDEWQEAASCPVPQFSGKEPSAWK
WTLGPVVLYACEIIRFWRSHQEVVITKVVSHPSAVLELHMKKRDFKMAPGQYIFIQCPSISPLEWH
PFTLTSAPQEDFFSVHIRASGDWTEALLKAFGAEGQAPSELCSMPRLAVDGPFGGLADVFHYVPS
VCIATGIGVTPFASLLKSVWYKCCESQSLPGLSKVYFYWICRDAAAF EFWADLLLSLETQMSEQGK
AHL LSYHIYLTGWDEYQAIHIALHWDES LDVITGLKQKTFYGRPNWNEEFKQIAYNHPSSSIGVFF
CGPKAMSKTLQKMCRLYSSSDPRGVHFYFNKENF

>human-Hs-Nox4: GenBank™ No. NM_016931.2

MAVSWRSWLANEGVKHLCLFIWLSMNVLFWKTFLLYNQGPEYHYLHQMLGLGLCLSRASASVL
NLNCSLILLPM CRTLLAYLRGSQKVPSRRTRRLLDKSRTFHITCGVTICIFSGVHVA AHLVNALNFSV

NYSEDFVELNAARYRDEDPRKLLFTTVPGLTGVCMVVVLFLMITASTYAIRVSNYDIFWYTHNLFFV
FYMLLTLHVSGLLKYQTNLDTHPPGCISLNRRTSSQNISLPEYFSEHFHEPFPEGFSPAEFTQHKF
VKICMEEPRFQANFPQTLWLWISGPLCLYCAERLYRYSNKPVTHISVMSHPSDVMEIRMVKENFKA
RPGQYITLHCPSVSALENHPFTLTMCPPTETKATFGVHLKIVGDWTERFRDLLLPPSSQDSEILPFIQ
SRNYPKLYIDGPFSGPFEEESLNYEVSLCVAGGIGVTPFASILNTLLDDWKPYKLRRLYFIWVCRDIQS
FRWFADLLCMLHNKFWQENRPDYVNIQLYLSQTDGIQKIIGEKYHALNSRLFIGRPRWKLLFDEIA
KYNRGKTVGVFCCGPNLSKTLHKLSNQNSYGRFEYNKESFS

>mouse-Mm-Nox4: GenBank™ No. NM_015760

MAVSWRSWLANEGVKHLCLLIWLSLNVLLFWKTFLLYNQGPYYIYHQLMLGLGLCLSRASASVLN
LNCSLILLPMCRTVLAYLRGSQKVPSRRTRRLDCKSKTLHITCGVTICIFSGVHVA AHLVNALNFSV
NYSEDFLELNAARYQNEEDPRKLLFTTIPGLTGVCMVVVLFLMVTASTYAIRVSNYDIFWYTHNLFF
VFYMLLLLHVSGLLKYQTNVDTHPPGCISLNRQTSSQNMSIPDYVSEHFHGLPRGFSKLEDYRQK
TLVKICLEEPKFQAHFPQTIWISGPLCLYCAERLYRCIRSNKPVTHISVINHPSDVMELRMIKENFK
ARPGQYIILHCPSVSALENHPFTLTMCPPTETKATFGVHFKVVDWTERFRDLLLPPSSQDSEILPFI
HSRNYPKLYIDGPFSGPFEEESLNYEVSLCVAGGIGVTPFASILNTLLDDWKPYKLRRLYFIWVCRDIQ
SFQWFADLLCVLHNKFWQENRPDFVNIQLYLSQTDGIQKIIGEKYHTLNSRLFIGRPRWKLLFDEIA
KCNRGKTVGVFCCGPSSISKTLHSLSNRNNSYGTKEYNKESFS

>rat-Rn-Nox4: GenBank™ No. NM_015760

MALSWRSWLANEGVKHLCLLVWLSLNVLLFWKTFLLYNQGPYYIYHQLMLGLGLCLSRASASVLN
LNCSLILLPMCRTVLAYLRGSQKVPSRRTRRLDCKSKTLHITCGITICIFSGVHVA AHLVNALNFSVN
YSEHFLALNAARYQNEEDPRKLLFTTVPGLTGVCMVVVLFLMVTASTYAIRVSNYDIFWYTHNLFFV
FYMLLLLHVSGLLKYQTNLDTHPPGCISLNRTPSQNMSIADYVSEHFHGLPGGFSKLEDHYQK
TLVKICLEEPKFQAHFPQTIWISGPLCLYCAERLYRCIRSNKPVTHISVINHPSDVMELRMIKENFK
ARPGQYIILHCPSVSALENHPFTLTMCPPTETKATFGVHFKVVDWTERFRDLLLPPSSQDSEILPFI
QSRNYPKLYIDGPFSGPFEEESLNYEVSLCVAGGIGVTPFASILNTLLDDWKPYKLRRLYFIWVCRDIQ
SFQWFADLLYVLHNKFWQENRPDFVNIQLYLSQTDGIQKIIGEKYHTLNSRLFIGRPRWKLLFDEIA
KCNRGKTVGVFCCGPSSISKTLHNLSNRNNSYGTKEYNKESFS

>dog-Cf-Nox4: GenBank™ No. XM_542262.2

MENAVMILCTEYEHDEEYIDYRFIWLNSLNVLLFWKAFLLYNQGPYYHYLHQLMLGLGLCLSRASASVLN
CSLILLPMCRTLLAYLRGSQKVPSRRTRRLDCKSRTFHITCGVTICIFSGVHVA AHLVNALNFSVNYNEDFTE
LNAARYRDEDPRKLLFTTVPGLTGVMVLVFLMITASTYAIRVSNYDIFWYTHNLFFVFYMLLMLHVSGG
LLKYQANLDTHPPGCININGTRYQNIHLPNYRSEHFHESFPGGLSKPDELQNRVNICMEEPRFQANFPQLP
MWELTPCTLCLYCDTCFTSVKLNAPKVIVSNMINHPSDVMELRMIKENFKARPGQYIILHCPSVSALENHPFT
LTMCPPTETKATFGVHLKIVGDWTERFRDLLLPPSNQDSEILPVIQSRKYPKLYIDGPFSGPFEEESLNYEVSLCV
AGGIGVTPFASILNTLLDDWKPYKLRRLYFIWVCRDIQSFRWFADLLCVLHNKFWQENRPDYVNIQLYLSQT

DGIQKIIGEKYQALNSRFLIGRPRWKLLFDEIAKCNRGKTVGVFCCGPNISIKTLHKLSNRNNSYGTRFEYNK
ESFS

>frog-Xt-Nox4: Ensembl No. ENSXETP00000025676

MALPCASWLSNEALKHLFLLSWLALNIGLFYKTFVYYSGPQYFYLHQMLGLGLCVSRASASVLN
LNCSLVLLPMCRTVIGLLRGPKMVNIHWKTRRMLDKHKTFHAACGLAICLFSAHVLNAVNFVSNY
NHEFPSINVARYKNEVVPVGTGVLMLVILFLMCTASTSSIRTANYGIFLHTHNLFFIFYLLLLLHACA
GVLKYQSNLEEHPPGCLYLNRSAQGEVPGAAADGGEFPGRAARALMGSFFSHEDMSVHNNSEKIC
TKGPTFRPHFPETWLWISGPLCLYCAERLYRIRSSKPVTVAVITHPCDVVEIRMVKEKFSARPGQY
ITLLCPSVSALETHPFTLTMCPTESKATFAIHIKVVGDWTERFYELLESHTAGTEILPKCQQRKNP
KIYVDGPFPGSPSEEVFNQISLSCIAGGIGVTPFASVLNRLLDSWDGYKLQRLYFVWVCRDIHSFLWF
ADLLCLLHRKLWQENRPDYLNILYLSQTNGIQNIIGEKYQALNSRSLIGRPQWKLLFEEVAKSSRG
KTVGVFCCGPKGISKELHKLCNSANQYGTTFEYNKESFT

>chicken-Gg-Nox4: DDBJ™ No. BR000274

PSYLTLPVVFVQLGLCVSRASASVLNLCCLVLLPMCRIILAFLRGSQKVASRKTRRLIDKSKTFHVT
CGVTVCIFSVLHVA AHLVNALNFSENYNEDFLAINAANYRGEDPRKLLFATVPGLTGVIMVLVFL
MCTASTYAIRVSNYDIFWYTHNLFFVFIYLLMLHVSGGVLKYQTNLEEHPPGCFNPNKTLGNMTV
PKSFEELFPDYTTEPFPELDFPQPLVQSNFMRICSKEPKFQSHFPETWFWISGPLCLYCVVERLYRI
RSNKPVTITSVISHPSNVLEVRMIKDDFRARPGQYVILHCPRVSGLESHPFLLTMVRNKNTKATFGV
HLKVVGDWTERFRDLLLLHSNQDAEILPIFQQRHYPKLYVDGPFPGSPFEESLNYEVS LCVAGGIGV
TPFASVLNALLDGWKCYKLRRLYFIWVCRDVESFRWFADLLCMLHNKLWQENRPDYINIQLYLSQT
DGIQKIIGEKYQALNSRLLIGRPRWKLLFDEIAKYNRRKTIGVFCCGPKMSKILHKLSNNSNPYGT
RFEYNKESFS

>medaka-Ol-Nox4: Ensembl No. ENSORLP00000013799

MAVSVRSWLANEAGKHFVLMWLWLAANTWFLDITYLLYSTGQQYHYLYQMLGLGLCISRASASVLN
LNCSLVLLPMCRLSLTFIRGSHTMSTRMRRLLDKSKSFHVACGIAICIFSAHVSAHLINVVNFSAG
FSEDFPALNLARYKGEDPKLIIFTTIPGVSGVLLVLLILLLMFISSSH CIRVCNIEIFWYTHNL FIVFYII
LMVHMAGGALKFQTNIEAHPGCLRASQSLRQQQQAEDLDQKQRCKEDAHFQPHYPQTLWVVS
GPLCLYCVVERFYRIRSSHPVTIVTVIRHPCDVVELRMLKKNFRARPGQYILLNCPGVSPFENHPFT
LTACPTENKQTFGIHLRIVGDWTEHFAHLLLPQPRAALEILPVVHQRRYPTLYVDGPFPGSPSEEVFN
YDVS LCIAGGIGVTPFACVLNALIPSERWQSFRLQRLYFVWVCRELQSFYWFAELLCALHEKLWQD
NRPDYLNKLYVTQKDSLQSMSELRYRPLAARLQVGRPKWKLLFDEIGKSNKDKRVGVFCCGPKG
ISRTLHRLCNSAKSSGATFEFNKESFS

>fugu-Tr-Nox4: DDBJ™ No. BR000275

MSVRSWIANEGGKFLVLMWLWLVNTWMFLNTFLLFSSGEQYYYLYKMLGLGLCISRASASVLN LN
CSLVLLPMCRLSLKFI RGTHTVSSRKTRRMLDKYKTFHVACGLAICIFSAIHVSAHLANAANFSTSY
SEEFPSLVNARYRGEDPKWIILTTPGVGTGIVLVLLILFLMLMSSSN CVRSFNIEIFWYTHNL FIVFYIV

LMVHMGVGLKYQTNIEAHPGCLTANQSNMDPQAKEMEKADNEERRCTEEAHFQGHYPQTWI
WLSGPLCLYCAERFFRYIRSCDPVTIVTVIRHPCNVIELQMLKNKFAARPGQYILLNCPAVSSFENHP
FTLTTCPTENKKTFSIHLRIVGDWTERFTQLLLTGSRTDMKTLPMVQHRKYPKIYVDGPFSPSED
VFNYDVSLCVAGGIGVTPFACMLHTLLDRGWTHFRLQRLYFVWVCSELQSFYWF AELLCSVHHKL
WQENRPDYFNMKLYVSQTDSLENMSAKYRPLTSRLLVGRPRWKLLLNELGKTNKHKRIGVFCCG
PKAISRTLHRCNSFQSSETVFEFNKES

>zebrafish-Dr-Nox4: Ensembl No. ENSDARP00000079892

FSARFSQLLLQPSNSSEILPMMHQRRYPTVHVDGPFSPSEEVFNIEVSLCVAGGIGVTPFACVLQA
LYDDWCHYKLRKLYFVWICRDIQCFYWFADLLCGLYEKLWRDNRPDYLNQVLYLSSSQGLQSIGEE
RYRFLSSRLRIGRPNWKLLFQEIGRANQLKRVGVFCCGPKGISKALHTLCSNSPHSHTAFEYNKES
FS

>tetraodon-Tn-Nox4: Ensembl No. GSTENP00010317001

QCPTEKRKTFSIHLRVVGDWTERFTQLLLPGSRDLKILPVVQQRQYHKIYVDGPFSPSEEVFNIDVSLCV
AGGIGVTPFACVLHTLLDGWTHFRLQRLYFVWVCRELSFYWF AELLCSVHHKLWQENRPDYFNMKLYVS
QDTLQVMSEEKYRPIITSRLLVGRPRWKLLLNEVGKTNKHKRVGVFCCGPKAISSTLHRLCNSFQSSETVFE
FNKESFN

>ascidian-Ci-Nox4: GenBank™ No. NM_001033829 (Chromosome 6q: 909K)

MQLKNYLVNDGLRFLIWWAWISINASLFYFTFMYYNGIQFYLLHQMLGYGLCISRASAACINLNSS
FILFPMCRGLVTFMRGLPRGVGRQVRRLDRGRSFHILCGYILCLLAGVHCAAHAYNAVYFSKYNN
SRYKDLNVAKYSNQNPMLLVTSLSGITGILLVVISLVISAFASRPIRRNNHNKFWKTHHIFIVFYALI
FIHAMDGVIKYQTNVDQHKPGCFILIDQTNNTSNISMVQPEPEPFNHPMSVVKPMVAVPEPPHRE
PFPNMKLASKMPSKTDKFMNNTAPQPHHVIMPEPEPMPHKGAGAPNTRIFVHGSWVEVME
CVQPPPKFSSCRQEAWLWLCAPLIYVIERIGRHRSSHVDVTTIVKFIEHPCDVIELRLYRNGFSAKP
GQCIWVRCPQLSKVESHFSLTSVPSKDDPTFGIHKVLRGDWTEELRDLMVRELNPVVEILKDKII
AGGNFLEKDDDELNSRGETEYKCNPDNSQYLATMASPNQSINKPCMVNFRFTQETDFQMCTLSN
STISVYDNHEMPHTQENIDDQTCKKTSSTCLSQYSLESESRNLPKSTTLHSDKQQLNETTLYS
EDQRNVPKSTALVSEACSTKNDIHLPCNQTVSKQLPILCVGPTGGAMEDIFKYKISMVAGGIGVT
PYASVLNALLKDEDLFSRMKLRKLYLIWSCKDPRSFWSFASLIRDVQIVLWKRNCDDLVSRLHITG
SNTLQSEESGDQLLSDIQGCHVAYGRPDVTQVFEEIRTAQYQRSTVGVFCCGHRLVSSVKHHCL
KTKSSKVKFLFNKEAF

>mosquito-Ag-NoxM: GenBank™ No. XP_310312

LLWTGFNFVVFCKAFSNNYHHDVEYYLSRILGNGLCVSRGTAPVLNVTMALITLPTCKTFNLLLHK
LFGRCSTRLLVHYLEKTKVLHLILGCSLLIVAIVHSVAHFVNIVNFIDNYDEREINWANGPDDNV
LRLLFATPTGFGSCIMLLTLAAMAYLARRSMRDRFYNSFFTSHHLFLVFGMMFYHPLRLVHGGST
LND AIDRFNIIKHQTNVDKHKIMCDLVDNVTLHSNEDLLVLCEPPQFSAGTKRAWIWPLVGLAIY
LADISFRYLTSHSERYRVTTVQTYAMAGHAIHLRLQFCRKAMVKILPGQYVLLQCPAISTLEWHPFT

ITELPIEGRNDITLTIKVRGDWTEELYDRIVQREQCKRNLGGVDPYRRIEFLLDGPYPVMSNMLDC
KRILFVGAGVGITPFVTIMRLLSSNVDPARVHLVWIARNLETFLWFSDEIARLQEKFWSQNKPD
FWVKLYWTQNYDEHLLAECFGDMPSIKSRMHRGRPNWNVDFIDLVTLYPKKSVSFVSCGPKELTK
EIRLKCKEYSKHGCKLSYFHEGFG

>mosquito-Ae-*NoxM*: GenBank™ No. EAT37894

MAIITLPSRSFNVLLNALFGRWSIRALVFYLEKIKVLHFLGTGLIIVGVIHSIAHFINIINFVDNYDA
KFDAINWATGKDDSKLRLLVATPTGFSGCVMLVTLFAIAYFSSRQMRDRFYNSFLASHHLFLVFGM
MFYHPLSNIIKHQTNLKAHPNGCDIIDDHVFRNDSVLQAICSEEPKFSAGDKSAWIWPLMGLSIYIL
DIIIRYLIAHSDRRKVSTLQSYVLPANGVYLRLRFTSSKRIVISAGQYVLLQCPAISTLEWHPFTVVDV
SIHNTVSLTVAVRGDWTQRLYDLVSEKERLKQSGAGHDALGRLQFLLDGPYPSAMTGMLKCKRIVY
IGAGVGITPFAGFVRHLLNFNTDRPSRIHLIWIWRKAEMFTWFADELKRLQERFWKQNKPDRFTLK
LFLTRNYNVNVIDEYFGDYPTLKARINKGRPNWDEVFLDLTALYAGKSVTVFSCGPKGMTKELKG
MCREYRKHACKFTYLHEGFG

>human-Hs-*Nox5*: GenBank™ No. AF353088

MNTSGDPAQTGPEGCRGTMSAEEDARWLRWVTQQFKTIAGEDGEISLQEFKAALHVKESFFAERF
FALFDSDRSGTITLQELQEALTLIHGSPMDKLFQVYDIDGSGSIDPDELRTVLQSCRESAISL
PDEKLDQLTLALFESADADGNGAITFEELRDELQRFPGVMENLTISAHWTAPAPRPRRRRQL
TRAYWHNHRSQLFCLATYAGLHVLLFGLAASAHRDLGASVMVAKGCGQCLNFDCSFIAVLMRRC
LTWLRATWLAQVPLDQNIQFHQLMGYVVVGLSLVHTVAHTVNFVLQAQAEASPFQFWELLLTTR
PGIGWVHGSASPTGVALLLLLLLMFICSSCIRRSRGHFVYFWTHLSYLLVWLLIFHGNFVWKWLL
VPGILFFLEKAIGLAVSRMAAVCIMEVNLLPSKVTHLLIKRPPFFHYRPGDYLYLNIPTIARYEWHPF
TISSAPEQKDTIWLHIRSQGWNTNRLYESFKASDPLGRGSKRLSRSVTMRKSQRSSKGSEILLEKHK
FCNIKCYIDGPYGTPTRRIFASEHAVLIGAGIGITPFASILQSIMYRHQKRKHTCPSCQHSWIEGVQD
NMKLHKVDFIWINRDQRSFEWVVSLLTKLEMDQAEAAQYGRFLELHMYMTSALGKNDMKAIGLQ
MALDLLANKEKKDSITGLQTRTQPGRPDWSKVQKVAAEKKGKVQVFFCGSPALAKVLKGHCEK
FGFRFFQENF

>dog-Cf-*Nox5*: DDBJ™ No. BR000277

DPAQPDLESCRGTMSTEEDAKWLQWVTHQFETIAEKDREINLQQFKTALNVKEAILFAERFFTLFD
SDGSGTITLQELLEALTLIHGNPMDKLFQVYDVGWARQGGVCRYRVGPSTRPHSAASPLGT
GSGSIDADELRTVLRSCMRESAISLPDEKLDQLTLALFESADKDCNGAITFDELDELQRFPGVME
NLTIRCGSASRVGTARVQVPLQLRRLALTWAYWHNHRSHLLCLAAFAGLHLLLFALAASEHRARGA
SVMVAKGCGQCLNLDGSFIAVLMRRCCLTWLRATWLAQVPLDQNIQFHQFVGYVVIVLSLVHTVA
HIVNFALQAQAEASPFQFWELLLTTRPGIGWIHGLASPTGVALLLLLLLMFACSSCIRRSRGHFV
YWTHLSYLPWILLILHGNFVWKWLLVPGTLFFLEKIIGLAVSRMAALCIVEVNLLPSKVTHLLIKR
PPLFHRYRPGDYLYLNIPTIARYEWHPFTISSAPEQKDTIWLHIRSEGGWNTNRLYESFKTSCPMDCDP
KPLSRSLKMRRSQRRPEVSEKSSENHLFCNIKCYIDGPYGTPTRRIFASEHAVLIGAGIGITPFASILQ

SIMYRHQKRKNICPSCQHSWMDSAQDEDMKLHKVDFMWINRDQRSFEWFVSLLTKLEMDQAEIS
QEGPFLELHMYMTSALGKNDMKAIGLQMALDLLAKKEKKDSITGLQTRTQPGRPDWNKVQKVA
AEKKGKVQVFFCGSPALAKVLKKGHCEQFGFKFFQENF

>cow-Bt-Nox5: DDBJ™ No. BR000276

MSAPGDTAWTDSEGFRGTMNAEEDAKWLQVWTHQFKTIAGEDGEINLQDFKKALKVKESFFAER
FFVLFSDSGSGTITLQELQKALTLIHGSPMDKLKFLFQVYDVGKHPLWDGRRRTQREGQRERPVS
VTAQHWASSSPETGSGSIDADELRTVLQSCLYESAISLPKEKLDQLTLALFESADKDCSGTITFEELR
DELQRFPGVLENLTISAHWTTPPAPQRHRRQPRLLTSAYWHNHRSHVLC LAVFVGLHMLLFALAA
SAYRAFGSSVMVAKGCGQCLNFDCSFI AVLMLRRCLTWLRATWLAQVPLDHNIQFHQLMGYVVV
GLSLVHTVAHVNFALQAQSETSPFRFWELLTTRPGIGVWVHGSASPTGVALLLLLLLMFACSSSCV
RRSGHFEVFWYTHLSYLP MWLLLILHGPNFWKWLLVPGTLFFLEKTISLAASRMAALHIVEVNLLP
SKVTHLLIKRPPLFHYRPGDYLYLNIPSIARYEWH PFTISSAPEQKDTIWLHIRSQGQWTNRLFESF
KKPEPVFCGSKRLSRLEMKRSQRKPQVSEMSENHQCNIKCYIDGPYGTPTRRIFASEHAVLIGA
GIGITPFASILQSILYRHQKRKHICPNCQHSWMESGQDEDMKLHKVDFIWINRDQQSFEWFVSLLT
KLEMDQAEETQVGRFLELHMYMTSALSKNDIKAI GLQMALDLLAKKEKKDSITGLQTRTQPGRPD
WNKVQKVA AEKKGKVQVFFCGSPALAKILKKGHCEQFSFKFFQENF

>opossum-Md-Nox5: DDBJ™ No. BR000304

MNADDDAKRLEWVSFQFEIAGEDREIDLQEFKALKVKESFFAERFFALFSDSGSGTITLQELLGA
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LKESAISLP EEKLDLTLALFESADKDHSGSITFEELQEELDKFPEVMENLTISAANWLKPPSSKKR
PQIPRHLSAYWHNNCGKLAVLAVYIGLNILLFTLAALKYQSSGTRIMIARGGGQCLNFNC SFIVVL
MLRRCLTWLRATWLRVPLDQNV EFHQ LIGYVVVGFSFLHTTAHVNF AQLAQSENSTFQFWEY
LLTTRPGIGWVYGTASLTGIVLQLLILIMLVCS CSFVRRSGHFEVFWYTHLLYISIWALLIVHGPNFW
KWLLVPGLLFFLEKVGLVLSRMAALSIVEVNLLSSKVTHLVISRPPFFRYKPGDYIYLNIPAIKYE
WHPFTISSAPEQEDTIWLHIRSQGQWTNRLYEYFKAADPICLGAKRLTQSLKLRRSQRKSQKEGPS
PVNENHRFCIKICYLDGPYGTPTRRIFASEHAVLIGAGIGITPFASILQSIMYRHQKRKHICPNC HYS
WCEDIRDDFLIFKVDFIWINRDQKSFEWFVSLLTKLEMDQAE EHGHHFLELHMYMTSALS KND
MKAIGLQMALDLLAKKENKDSITGLKTRTQPGRPDWSKVQKVA AEKKGKVQVFFCGSPALAKVL
KSHCEQLNFKFFKENF

>chicken-Gg-Nox5: DDBJ™ No. BR000278

LLALQAPGTMGTAEDA AWRWVTERFQSIAGHDEEIGLEEFKAALQVKESFFAERFFALFDVDGSG
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RVLLEAADQDNGSITFQELQQQLEAVPGLMESLTISAASWLKPPAPTRHSRRPRCPTSRSWHNHR
GQLAFLGGYVSLNLLFTLAALRHFGGSGWVAAARGCGQCLNFNC PFIAVMPMLRACLTRLRATPA
GRALPLEHCVALHQPVGSAVLALAVLHAGAHVANYGR LAQDGHGALSEFLVARPGGGGFGGTAP
QTGLALQLLLFAMLA FSSPCVRRGGHFELFYWSHLSYVPVWALLLFHAPNFWKWFLVPGGLFVLE

KAVGTAVSRAVGLRIVEVHLLPSQVTHLVIQRPRSRFEPGDYIYLNIPAAAYEWHPFSSSAPEQQD
TIWLHIRSLGQWTTTRYEFFRQPEPLQPHGNLERKGGSGCRWVSAGLCFLQAQRLNRAVCRLQG
GLRAVPVGRSAPAARSTQHRLGLSKKGNKNHTGDAAIELTSYRRSGAPTTTRGTEDGDRDWDTSL
QAVGASTAPKPPRRPQGRGGPSLSCDARCPNDFGIEVGVHRSISHHSHWAQGSWESGCGECWKLW
EQGGGGFPLLLMDAPHLQVSVGPGESQQLCSEIKVSSGERNGVGAVLSRVLALPRAEHPASVLGLSP
CFWVLSLYLSQCYIDGPYGTPTRRIFTSEHAVLIGAGIGITPFASILQSIMXQVGPYRQRKQSCPCSET
VWDEDMALTKVDFIWINRDQQHFVFLDLLAALELQQEEQDPGGRFLELHLYMTSALGRSDVKA
VGLQLALDLLAAKEQRDSITGLRTRTQPGRPDWSQVLGRVAEERKGVHVFVFCGSPALAKVVRMH
CERFGFRFFKENF

>frog-Xt-Nox5: Ensembl No. ENSXETP00000017078

TMSTEDDSKWLEWVTKQFENIAGDDKEIDLEEFKTALKVKESFFAERFFALFSDSGSGSISLDELL
KALNLLIHGNETDKLRFQVYDVIDWCLCPPTGSRTDSEWNSRHTVHWQCLEPFSFPGSGSIDPS
ELRTVLKSCRESAISLPEEKLDDTLVLFESADKDHSGSITFQELKEELERFPEVMENLTISAANW
LKPPAVQNKSHTPRYLTRTYWHNNRSLKLLFMCCYWCLNVLLFGLAAVNHASLGGWIMVAKGCGQ
CLNFNCTFIVMMLRRCLTWLRTTCVVRFLPLDQNVVLELIGYVIFVLTVIHTAAHVNTNFTLINLT
EKTGAYTFWEYLLTIRPGIGWISGTASITGILLQLLICMLLFSNTFVRKGGYFEVFWYTHLSYIWIW
ILLFLHTPKFWKWFLVPGLLFLEKLFGAAVSRTGDVYITEVNLLASKVTHLVIKRPPSFQFKPGDY
IYLNIPVIAKYEWHPFTISSAPEQADTIWLHIRSLGQWNTNSLYEYFHYPQTVNRHETKRQILTQKNR
QHHSQVSANDMKCSYDMFNHRHQFIDRYCYIDGPYGTPTRRIFTSDHAVLIGAGIGITPFASILQSIMY
RYRMRKQNCPCSQYSWCETLKENEMDLRKVDFIWINRDQKFFEFVSLTKLELDQADEEPDET
GRFLEMHMYMTSALSKNMKAIGLQMALDLLAQKEKKDSITGLRTRTQPGRPDWNKVFKIEQE
NKGKVQVFFCGSPALAKIIKAHCEKFNFKFFKENF

>fugu-Tr-Nox5: DDBJ™ No. BR000279

FFAERFFALFSDSGSSSISLDELLKALDLLIHGSETDKLRFQVYDVGSGSIDPDELRIVLKSCLR
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MVLMLRRCLTWLRTWVVRVPLDQNILHQIVGYAILFYTLHTSAHIFNFVQLSESSGFTLWEYL
LTTTRPGIGWVKGTASVTGVVLQFMICMLVCSSTFVRRSGHFEIFYWSHLSYVWVWILLMVHCANF
WKWFVAPGFVFLLEKIIGIAVSRMGGLYIVEVNLLPSKVTHLVIKRPQFFHFKPGDYVYINPEIAKY
EWHPFTISSAPEQSDCLWLHIRSMGQWNTNRYEYFRQLDRQTVSTKRLSVTLRKHRQLPKAKVHT
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VPPEPLLEDELSAERGEAPPLREVRDHIKGLLGLLFYSNKGFNLSLYCRFLQSLIIGSATSRSKA
QLRNAANKMHLNNFLFKMSFLADEGKQENHSLVSDLSVTYDIEQILLKTSAHTDTEESVKTSDAH
SMTLYRFQCYVDGPYGTPTRQIFASEHAILGAGIGITPFASILQSIMYKYRRRKQNCPCNYSWCEN
LKSDMKLRKVDFIWINRDQKSFVFLTKLEMDQADEEPEGRFLEMHMYMTSALSKNMKA
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QCEHYKFNFYKENF

>tetraodon-Tn-Nox5:Ensembl No. GSTENP00000868001

MLQHRSGAACYMMLAKGCGQCLNFNCTFVMVAARAPAGRGLEPRVKRASPTCVQVLMMLRRCLTWL
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RTSESSGFTLWEYLVTTTRPGIGWVKGTASLTGVVLQLLIGLMVLCSSTFVRAHGHFEVFWSHLSY
VWWALLMVHCANFWKWFVPGFVFLLEKIVGIAVSRMGGLHIVEVNLLPSKVRWTHGWVWASH
VVPSAMAGRCVCVRPQVTHLVVRRPQFFHFKPERYVYINPEIAKYEWHFPFTISSAPEQSGTCRRRA
RKPPGLTGTNAPVDPLRFLRTPQLGGVVGEGDCTLSSPRRLPVAPHLHGPDVQPPVRVLPGTG
EPDLQQHQEADGEPEKAAAAAEGPGFGQVWRQSSVLQHQVLRWDYGTPTRQIFASEHAILIGAGI
GITPFASILQSIMYKYRRRKQNCPCNYSWCENLKSDMKLRKVDFIWINRDQKSFEWVSVLLTKL
EMDQADEEPEGRFLEMHMYMTSALSKNMKAIGLQMALDLLAKKEKRDSITGLRTRTQPGRPD
WGKV

>zebrafish-Dr-Nox5:Ensembl No. ENSDARG00000011667

IINVLSGSIDPDELRTVLKSCRESAISLPEEKLDDTLALFESADKDNSGSITFEELKAELETPE
VMENLTISAANWLKPPDLEQNKRKTPLYLTRAYWHNNSRKLFFLCYGLLNTFLFIMAMLKHAD
GGLWIMLARGCGQCLNLCNCTFVMVLMMLRRCLTWLRATWVVVRVPLDQNILHQQVGYAILFVSVG
HTGAHIMNFARLSQNDGAYQLWEYLFITIRPGIGWVNGTASITGVVIQILIGLMVVCSSTFVRRSGHF
EVFYWVSHLSYIWSALLVHVCANFWKWFVVPVGAFLIEKLVGIAVSRMGGLYIVEVNLLPSKVTHL
VIKRPPFFQFKPGDYVYINIPTIAKYEWHFPFTISSAPEQQETLWLHIRSMGQWTNRLYEYFRQPDQ
TNKRLTASLRSRRHQSAQLTAKLSENHRYCNICYVDGPFQTPTRQIFASEHAILIGAGIGITPFAS
ILQSIMCRYMRKQNCPCNSYSWCETIKDNEMKLRKVDFIWINRDQKSFEWVSVLLTKLEMDQAD
EEPEGRFLEMHMYMTSALSKNMKAIGLQMALDLLAKKEKRDSITGLRTRTQPGRPDWAKVFQK
VSEEKKGKVHVFCYCGSPALAKVIKAQCERFGFHFYKENF

>rabbit-Oc-Nox5: DDBJ™ No. BR000301

FLELHMYMTSALGKNMKAIGLQMALDLLAEKEKKDFITGLQTRTQPGRPDWVNFQKVAEEKK
GKVQVFFCGSPALAKVLAHCADFRFRFFQENF

>armadillo-Nox5: DDBJ™ No. BR000302

MWLLLHVHGNFWKWLVPGLLFVLEKAIGLTASRMAARYIMEVNLLPSKVTHLVIKRPSLFHYRP
GDYVYLNIPYIARYEWHFPFTISSAPEQKDTIWLHIRSEGQWTNKLYESFKASDLVGSKRLSRSLR
MRRCSRP

>medaka-Ol-Nox5: Ensembl No. ENSORLP00000017662

KHSQGSNVVVLVSSGCSGVSCIMSVDEEDARWLEWVTKQFESIAGDDKEINLCEFKTALKVKESFFAE
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KSCLSESAISLPEEKLDDTLVLFESADTDNSGSITFEELKEELENFPEVMENLTISAANWLKPPDL
DQNKHQTPRYLTRAYWQNNRKLFLFGYGVNLLLFFVAMLRHSDGGVWLMVARGCGQCLNFN
CTFIVVLMMLRRCLTWLRATWVVVRVPLDQNILHQQVGYAIFCFSLGHAIHVVNFDLTSTNLSQHS

EFLLWEYLLTTRPMIGWVKGTASLTGVVLLLLICLMVLCSSTFVRRSGHFEVIFYWSHLSYIWVLLLL
IVHCANFWKWFVVPGLLFLEKIVGIAVSRMGGLYIVEVNLPSKVTHLVIKRPQFFHFKPGDYIYI
NIPVIAKYEWHPFTISSAPEQSDTLWLHVSRMGQWTNRLYEYFRQTDSMELCSGRLATSLKRRRQQ
AKAEVSAKFAENHRVCNIKCYVDGPYGTPTTRQIFTSEHAVLIGAGIGITPFASILQSIMYRYRLRKQN
CPSCNFSWCENLKSDMTLRKVDIFIWINRDQKSEFWFVSLLTKLEMDQADEEPEGRFLEMHMYM
TSALSKNDMKAIGLQMALDLLAKKEKKDSITGLRTRTQPGRPEWKGKVFQKLSKENKGVHVFYC
GAPSLAKAIKAQCERFGFNFKENF

>sea urchin-Sp-Nox5A: GenBank™ No. XM_001177608

MATARRKSSLAFFSSVCGNAQPADEDSQWLSWAEEKQFCQIAGEDRQIDEDEFKMALNIKKSSFAERFFHLFD
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SALFEAADTDGSGAISFEELKEELEKNPDVMENLTISAASWLKPPSLKPSRRVLPYLTWRYVHNNYRKILFL
VVFILINVALFTEAAYRYAKKSNWCLITARGCGQCLNFNSAFVLVLMRKTITTLRTTKAAEILPTDQNIIV
HKLVGIFIALLSGIHTLGHIGNAWFVEKTTDGNVTMSALLFTNPHLTSGLAPVSGSAFLTGWVLDIILAIMVI
CSMPFVRRSGHFQVYFTHMLYVVFVWGLLLIHGPRFWYWFVVPGIIFIVEKLSQTKCVKQARYGKTYVQEV
NLLPSGVTHLALTRPNRFHYKAGDYIFINIPQIAQYEWHPFTISSAPEQQGTISMHIRSAGNWTNRLYAFFEDR
QKRNRDETELLLSASDIRVAMETEEVEETNHAGEFIRLREMECDAAEADVVKPTLNHRGANGNLPGLPR
GYSVEREESEDNQHQHRTIACQTTFEMKGAKSWRSSLREEKIQVFIDGPYGTATRIGIFQAEHAILVGAGIGVT
PFASILQSIMHRYRVGRQTCPICQHTWLGNIPTDMMRLKKVDIFIWINRNQNAFEWFVSLLTQLEMEQAQEPF
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>sea urchin-Sp-Nox5B: GenBank™ No. XM_780967

MAGMQEKDEKWLVKLEKHFQEVAGDDNLIDLDEFINALNVKKSFFAERFFELIDTDQSGSISLDELIGALRL
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ELSEQLQRYPGITSNLTISYNLNRNHFVWIFVVMINAGLAAWGAYEGYQSVSDERHPAAISIARSAGRCL
SFECFVLVLMRKLTLTILRNTFLMSVPLDQHVVIHKIVAVFIIISVIHTAGHIANIGLIYQVENVNGTTAA
WILDVLRPFPLGLVEGSCIITGILIIIVLIIMTICSLPFIRNNGYFKVFYWTHQLCIVFWCLIIHSKYFWIWFIA
PGIILAERLVRLQFFRRARFGKVVYIQKGYVLPANVVQLVIQRPKFKFHAGEYIHVNIPIASHEWHPFTISS
APEQQEYLTLHIRCVGHWTKRLYDVVRERELTLEHENAGFGGEIDKDHDEPLEVIVDVSSTKSTTAVEPNGQ
QSIISDTHSNRNGRRSSQTYSKRRRTASGAINSGFEPELNGDKDGTCTVTEGKPYNTGQNDNESVTQKVNA
AQLSLPRKADHPSASQGDCQPMSEKELGEVSMTELVNGDSFKMKSLNSRQSIDVQEAPRGSTTKRQSLRVR
QSLVGREKRSVCGKPNGDVNRKMSLVTLRRNGARHSLDLSKDLGGRPHTGLEVILDGPYGAPAHIMEAE
HAVLIGAGIGITPFASILQINERYKAARKHPCNCHTWVTDSSSILKTKKVDFVWINRDQHSFEWFISLISAIE
LEQAEIPAADRFLDIHLYMTSALSPSDMKAIGLHVALDLIHKKKKRDTITGLKTRTQAGRPDWDEVFQNLKQ
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>fruit fly-Dm-Nox5: FlyBase No. CG3896

MDFAEQIESVAYVICGENKRVSFKNFRDIWHTRGILDKLYRLIELDGSNLVSTNQVMEFISHLTNSR

PRTGFDKSSSLARLEQLFRTTVGNEQEIRREEFQKIVTSKNPFFTERVVFQIFDKDNSGSISLQEFIDAI
HQSFGQSADDKIRFLFKVYDIDGDGLIQHKELHDVIRHCIKENGMFSEDQIEDLTSAMFEDADPH
NSGEITYEALKNQLHKGGLLENLSITDRWLVPPIAEDRQAGGAAKSGFWNSLPHQFSLAYMKNN
QVFVTYLFFYITVNLCLFISRAIQYRASNGFVIARACGQCLNFNCAWVVLVLMRLRHSPLYLRGRGLSS
YPLDHHVYLHKLGTITISVLSLIHTIMHLFNFSIIVINDPNINAGHYTIGEWLLTDRPGLFGLIPGCA
NPTGVALLAILVVMFVCSQPFVRRKGSFEVFWYTHLLYVPPFWILCLFHGPNFWKWFLLPGLVYIVE
RALRFIWMRGEHGKTYISSGLLLPSKVVLVIKRPFFFNFRPGDYVFNIPAIANYEWHPFTISSAP
EQEDYMWLHIRTVGWETNRLRYRFEREQQKLQSSGSSQEIQHMHAIPTPSFMLLNEARNPAIAG
ERSATPQTDFLAKNLGVQAVPPVRRPQRNRKPAPGAPIDPPATGVNRIRSIKKTQRFTSRKEAVDP
KKGIPNGAFIADGEREDSNLQRPLEKSISLPDISVKSCKRSRLKALRALGRSESESAFDEKRVRA
RNNSVGLAYLSPQNKSLAQSFYMRMTPKPTIAFKTSPMEEREHQVAAGEANGASPASRAEQGLSS
RMDSADKLQLARLSAEGASKPLEDQTQTGSPSRKSILRRPTFLRSLASINNRTGGGGGGSTGSS
TTNSGGKVTLDAGVMEIFIDGPYGAOSSHIFGAQHAVLIGTGIGVTPFASILQSIMHRYWKARHSCP
RCQFEWASEIPKSVMLNRKVDFFWINRDQRSFEWVFNLLSQLEIEQAEELGGAMERFLDMHMYITS
ALQRTDMKAVGLQLALDLLHEKGKRDITGLKTRTNAGRPNWDKVFQQLQAQQKGVTVFYCGP
PQLAKTLRYKCDQYGFARKECF

>mosquito-Ag-Nox5: DDBJ™ No. BR000280

IDFAEQLESVAYVLCGDGTVTYDKFCQIWHAKGILDKLYRLIDVDCNTLNISTNQIMEFISNLTNSRPR
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FAGQSPEDKIKFLFKVYDLGDGLIQHRELQHVMRACMEENGMRFSQIEDLTMAMFEDADKY
NRGAITYEALKNQLEKHGGLLENLSISIDRWLVPLPQEDTKKKRKKKPLPHQLTAPYIKNNYVYLS
FLTFTLINVGLFVSRAIQYRNSNGFVIMARACGQCLNFNCAFILVLMRLRQCITFLRTRGFTAFLPLD
QHIYLHKLTVLVVAIFSLVHTIMHLFNFTTIVVYDPVLNANNYTAEWLFTARPGLFGLIGGCANPT
GVVLVLLILLIMFICSQPFVRRGGSFEVFWYTHLLYVPPFWILVLFHGPNFWKWVIVPGLIYLVERTIRL
VWMRTEHGKTYISSGLLLPSKVTHLVIKRPPLHFCFRPGDYVFNIPAIQAQYEWHPFTLSSAPEQEDY
IWLHIRGVGEWETNRLHNNFFEREQERLHNGEIPALVAGRVGGAGGPVGPAGDATTAGIMKQRHP
PGTSKLAMEGYSAPSPVATSTAQPAKFERQMSDNRAFKKIQATLQRTFSRRDQLIPRSGGAGGVGGI
ANEGFSGDGQKVPLEKSLSPDMQNKFKKRERMMVLEMYMRSESESFDEVQIRKARLQSLGLA
YLSQNKSLAQSFYMRMTPKPTIAFKTSPLENCEPRDSTNSIVVSPGVFTQKDAEEGRTAGALPTSG
AASSVAVGSGAASAASSNPASRPVNYVPGKPLEIYIDGPYGAOSSHIFQAQHAILIATGIGVTPFASIL
QSIMHRYWKARHCCPRCSYEWSSSEIPPTIMNLRKVDFFWINRDQRSFEWVFNLLSQLEIEQAEELGS
AMERFLEMHMYITSALQKTDMAVGLQLALDLLHEKEKRDITGLKTRTNAGRPNWDKVFQIQI
DQKKGKVTVYFCGPPQLAKTLRYKCDQFGFQFRKEVF

>honeybee-Am-Nox5: DDBJ™ No. BR000281

DLIIQFENVAYSICCDNPVTFEKFQQIFSTKEIIDKLFRRIDEENLGYITSFQIMEFLSNISDTRPLAGF
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AGKSPDDKIKFLFKVYDIDGDGLIQLRELEHVMRACLEENGIRFSEEQIEELTMALFDDADQSNRG
AITFEALKKQLEKHEGLLENLSISIDRWLVPPKPKESKRKSRLLQLLASLRPYQLTKPYMKNNYVYIFF
ISIFILINVSFLVSRLYEYRKSNGYVMLARACGQCLNFNCSFILVLMRQCITFLRTHGFNSVPLDQ
HIYLHKVTGGGLICVFSIAHTLMHLLNFGTIVYDEILNHNNYTLSEWLLTSRPFGLVGRYANPTGF
ILVILFLIIMICSMFVRRGGCFEIFYWSHLLYIPYWILVILHAPNFWKWFIFGGLIYLLERIRRIAWSR
SQLGKTYISSGLLLPSKVTHLVIKRPPHFVVFHPGDYVFNIPVIARYEWHFPTISSAPEQEDYIWLHI
RAVGEWTNSLYSYFEKEQMKLQRDNIFPIENRNNPNVSESVSMNGKFLSPIPRGNRRSFDNSV FVS
DDEKITQSPQSVIGNLKFQIYNLSITDVKKMSNNRKLHSLLVSKMPLEKSVSPDMLPGKKKNDQ
LIATQGYRRKQSNLSTIQSAAEEGRLQMKFEENSKKNHNDIEFDSISHSLNYTVGKPLEIFLDGPY
GAPSSHIFQAQHAVLIATGIGVTPFASILQSIMHRYWKARHTCPKCKFSWASEIPTVMHLRKVDF
WINRDQQSFEWFVNLLSQLEMEQAELGDAMERFLEMHMYITSALQKSDMKAVTLQLAMDVHQ
MEKRDITGLKTRTNAGRPNWDKVFKHLQDQKKGKVTIFYCGPPQLARILRYKCDQFGFNFRKES
F

>mouse-Mm-Duox1: GenBank™ No. XM_130483

MGFHLALAWILLVGTLASLGAQNSISWEVQRFQDGYNNLMEHRWGSKGSRLQRLVPASYADGVY
QPLKEPYLPNPRHLSNRVMRGSAGQPSLRNRTVLGVFFGYHVLSDLVSVETPGCPAEFLNIYIPHG
DPVFDPKRGNVLPFQRSRWRDNTGQSPSNPRDQSNQVTGWLDGSAIYGSSHSWSDTLRSFSGG
QLASGPDPAFSDSQSSLLMWMAPDPSTGQGGPRGVYAFGAQRGNREPFLQALGLLWFRYHNLCA
RKLAQEHPHWGDEELFQHARKRVIATYQNIAMYEWLPSFLKQTPPEYPGYRPFDPSPISPEFVVAS
EQFLSTMVPSGVYMRNASCHFQGIPSHNSSVSGALRVCNSYWSREHPKLQRAEDVDALLGMSAQ
IAEREDHVVEDMQDFWPGLKFSRTDYASCLQRGRDLGLPSYTKAREALGLSPISHWQDINPAL
SRSNGTVLEATAALYNQDLSRLELLPGGLLESHGDPGPFSTIVLDQFVRLRDGDYWFENTRNL
FSKEEIAEIRNTSLRDILVAVTNVDPSALQPNVFFWLAGDPCPQPSQLSAKGLPACAPL FIRDYFEGS
GFGFLTIGTLCCFPLVSLLSAWIVARLRKRNFKRLQRQDRQSIMSEKLVGGVEALEWQGRNEPCR
PVLVHLQPGQIRVVDGRLTVLRTIQLRPPQVNLILSSNRGRRTLLLKIPKEYDLVLLFNMEEERQA
LVENVRGALKENGLSFQEWELREQELMRAAVTRQQRGHLLLETFFRHLSQVLDINQADAGTLPLD
SSTKVREALTCELSRAEFADSLGLKPQDMFVESMFLADKDGNGYLSFREFLDILVVFMKGSPEEK
SRLMFRMYDFDGNGLISKDEFIRMLRSFIEISNNCLSKAQLAEVVESMFRESGFQDKEELTWEDFH
FMLRDHSDLRFTQLCVKGVEVPEVIKNLRRASYISQEKICSPRMSAHCARNNMKTASSPQRLQ
CPMDTDPPEIRRRFGKVTSFQPLLFTeahREKFQRSRRHQTVQQFKRFIENYRRHIGCVAVFYTI
TGALFLERAYYYAFAAHHSGITDTTRVGIILSRGTAASISFMFSYILLTMCRNLITFLRETFLNRYIPFD
AAVDFHRLIASTAILTVLHSAGHVNVYLSISPLSVLSCLFPGLFHDDGSEFPQKYYWFFQTVP
GLTGVL LLLALAIMYVFASHHFRRRSFRGFWLTHHLYIFLYILLIIGSFALIQMPRFHIFFLVPAIYV
GDKLVLSRKKVEISVVKAEALLPSGVTHLRFQRPQGFEYKSGQWVRIACLALGTTEYHPFTLSAP
HEDTSLHIRAAGPWTRRLREIYSPPTGDTCARYPKLYLDGPFGEHGEWHKFEVSVLVGGGIGVT
PFASILKDLVFKSSVSCQVFCCKIYFIWVTRTRQRFEWLADIIREVEENDRQDLVSVHIYITQLAEKF

DLRTTMLYICERHFQKVLNRSFLTGLRSITHFGRPPFEFFNSLQEVHPQVRKIGVFSCGPPGMTK
NVEKACQLINRQDRTHFSHHYENF

>mouse-Mm-Duox2: GenBank™ No. XM_917937

MLPTSPKTLVLLGALLTGPLGPAGGQDAPSLPWEVQRYDGFNFKYHQGAAGSRLRRLIPANY
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YIPRGDPVFDPKRGNVLPFQRSRWDRNTGQSPSNPRDQSNQVTGWLDGSAIYGSSHSWSDTLR
SFSGGQLASGPDPAFPRNSQSLLMWMAPDPSTGQGGPQGVYAFGAQRGNREPFLQALGLLWFRY
HNLCARKLAQEHPHWGDEELFQHARKRVIATYQNIALLYQWLPFLQKTPPEYSGYRPFMDPSISPE
FVVASEQFLSTMVPPGVYMRNSSCHFRKFPKEGSDSSPALRVCNSYWIRESPLKTAQDVDQLLGG
MASQISELEDRIEDLRDYWPGPERFSRTDYVASSIQRGRDMGLPSYSQALLALGLEPPKNWSAL
NPQVEPQVLEATAALYNQDLSQLELLLGGLLESHGDPGLFSNILDQFVRLRDGDYWFENTRNG
LFSKEEIAEIRNTTLRDVLVAVSNVDPSALQPNVFFWQEGAPCPQPRQLTDDGLPQCAPVTVIDYFE
GSGAGYGVTLVAVCCFPLVSLIVAGVVAHFRNRERKMLLKKGKESLKKQPASDGVPAWEPGPK
KSYVPTLQLLPDRSLQVLDKRFVLRITLQSPQVNLILSSNSGRRITLLKIPKEYDLVLMFNSEE
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>human-Hs-Duox1: GenBank™ No. NM_017434

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>human-Hs-Duox2: GenBank™ No. NM_014080

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>chicken-Gg-Duox : GenBank™ No. XM_425053

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LSVLSCLFSSVFMNDGPDPPILPFTGMTGVLLLIILAVMYVFATHHFRRVSFQAFWITHHLYVLLYV
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>dog-Cf-Duox1: GenBank™ No. NM_001003122

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>dog-Cf-Duox2: GenBank™ No. XM_535461

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>rat-Rn-Duox1: GenBank™ No. NM_153739

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>rat-Rn-Duox2: GenBank™ No. NM_024141

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>frog-Xt-Duox1: Ensembl No. ENSXETP00000051515

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>frog-Xt-Duox2: Ensembl No. ENSXETP00000056553

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QFMATLLPAGIYTRNKTCHFHNVQSSDGGFWPAYRLCDSYWKRNPNIKTAQDIDNLLLGMISQIA
EKEDNVVVEDLRDYWYGTLKYTRMDYISWSIQQRDFGLCSYNHARQHFGLSPIANWSEINRSLY
QRNKELFEDLANLYGNDTEKLELFPGVMLESDGDPGELLTAIIMDQFQRLRDGDRFWFENSKNGL
FTLEEIERIKKTTFHHDVILSVTSADLGDFQPDVFKWVNGDPCPQPEQISAQMLANCTPPTVTDYFAD
SVTGYSILIAVICSFPLAQKVSFFIAWMVAQSRRRNFKRFQKRRAIQSIRQSLPAEGISAQEWQGPKE
PTCNVLLQIDPQHVIKVLDSRCAIRRTISLQSQKNVIVIQSNHSGSKTLLIRIPKEYDLVLLFHSEEEC
REFINQLQENGIELHQYNKKEKHLLKEAVTKKQRSHILETFFRQSFAQVLHITQSDNMGSSDKVKE
ALKCELSRTEFAESLGLKQPQSMFVESMFLADEDGNGYLSFREFLNILVIFMTGTPKEKSELFMFKM
YDVDGNGFLSKEEFFTMLKSFEISNNCISKDQTEQVIEIMFRDSGFQNKELTLEDHFYLLRDHD
KELRFSQICIAGMDAPEVFNQMCRRVSFVDTTNMCQSPNPSLTGRIRKKVRNNTFLMHINFFRTN
FPHLFDLEKQTRKLINKPKTSSEARLYTEAKKEKYPKGIHQKLQEFKRFAENYRRHIVCVVIFYGIS
VGLFLERAYHYAFESQHRGISEVTMPGIIISRGTAASISFMFSYILLTMCRNLTFLRETFLNQYIPFD
AAVDFHRLVAKTAILTEFKLLFSHQTDIKLMIVFTLRLCMSCYFLQATYSNDNVLSLNLHPECLPLL
TGLTGVLALLAVLALMYVFSSHHFRRISFRGFVWVTHHFYILLYILTLHGSFGLLQQPKFHVFLMAPA
LIFIRDSLISLRRKKTEINVMKADLLPSDVTCLRFQRPADFDYKSGQWVRIACLALGTNEYHPFTLTT
APHEDILSLHIRAAGPWTTTLRELYSPQVAELGGYPKIYLDGPFGEHGHQEWNKYEVSVLVGGGIG
VTPFASILKDLVFKSSVNSKIACKKIYFIWVTRTQRHFEWFADIIREVEENDKCDLVSVHIYITQLAE
KFDLRTTMLYICERHFQKVLNRSFLTGLRSITHFGRPQFEQFFISLQEVHPEVRKIGVFSCGPPGMT
KNVEKACQMLNKENQAHFSSHFFENF

>zebrafish-Dr-Duox: GenBank™ No. AB255050

AITWEVQRYDGWYNNLADHDRGAADASLVRLYPAQYMDGVYLARQEPHLPNPRISTTAMSGQSGLLSH
KNRSVLSVAFGYHVWSEISESRRAGCPPEFMHIK VQKDDPVFVSNSSQPVLLQFQRADWDTSTGKSPNNPRT
QVNHVTAWIDGSSYIYSSSSWSDALREFSGGRLSSSSSRDMPRRSSNGYLMWSSPDPSSGPDGSGSEL YEFG
NAWANENIFSVEGIIWFRYHNYLASKLHKEHPSWSDEELFQHARKRVIATFQNIAYEWLPAFLGTHVTSY
PGYQKYVDPGISVEFEAAAVRFGTLAPPGVYKRNRNCHYRSVVND DASKSPGLRLCNTFWNRNPHLQSS
LDVDELIMGMASQIAEREDNIIVEDLRDYMYGPLRFSRSDAVALTIQRGRDFGLPSYNQIREALS MAPVNSFE
DINPKLKDTKLLKELADLYENDISRLELFGGLLETQEGPGPVFSTIILDQFERIRNADRFWFENKQNGLFTEE
EIKAIRNTTFHDVLLDVTSAEKGDIIQRSVFFWVNGDPCPQPPIRASDLQPCTKAFSMSYFDDSSKVGFGVTV

VVLFVFPVVSIVASAVAQVRTARFKRFQKRSRGSTKHKEPAHGTTASEWLGHNTAPRQVTLAFSEKKVFQ
TFDENGSPSSHSLGNQDHLXVIVSNDHQHRAALLKIPKEYDLVLFEDGVQRSEFLSLLRSELEGRIQSLTV
MEKSEKEMLCDAVTRERQKIVETFFKHAFSKVLDIDKSDAGDLSRTREALQCELTRAEFASVLGLKSDSL
FVESMFTLADKDGNGYLSFQEFLDVIVIFMTGTSEEKSKLLFSTHDIKGDGFLSKEEFTSLLRSFIDISGALS
QADDGIAAMLQTAGLYNKDRFSWEDFHLLRDHSAQLNIKGMEVLGKKLGRQHVKVSFIRKNSSSSSVEEL
THTPEEEHGQELRQRQTKKAGQSQAKLYVRPQRERFNRNPVQQCVQQFKRFIENYRRHICTVVIY AISAGL
ALERCIYYGLQAHSSGIPETSMVDVLSRGSAA AISFLPYMLLTVCRLITMCRETFLNRYIPFDA AIDLHRQ
MAATALILSVVHSLGHLVNVYIFCISDLSILACLFPKVFSSNNGSELPMKWTFWFFKTVPGITGVILLIFAFMY
VFASHYFRRISFRGFWITHHLYVLIYVLTVVHGSYGLLQPRFHIYLIPPGLLFLDKLISLSRKKVEIPVLKAE
LLSDVTMLEFKRPQGFVYRSGQWVRIACLTLGTDEYHPFTLTSAPHEETLSLHIRAAGPWTSKLRAYSPE
KHQSSSEDSQKLYLDGPFGEHGEWTFEVSVLVGAGIGVTPFASILKDLVFKSSVKFKFHCKKVYFLWVTR
TQRQFEWLSDIIREVEDMDMQDLVSVHIYITQLPEKFDLRTTMLYVCERHFQKVNRSFLTGLRSVTHFGR
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>medaka-Ol-Duox: Ensembl No. ENSORLP0000006648

KGYCMHVTWHEIKQNIPTSATDSQSEITWEVPRFDGWYNSLGNPRRGSVGSRLVRLVPAQYWDGVYQPVL
EPLQPNRRLSRVLAEGPSGLPSTRNQTVLFLFFGYHVAFEISDLRSSGCPPEFMNIPVPGDPVFDPNATGEV
QLPFRGEWDQASGQSPSNPRTQINSVTAWIDGSSYGPSSWSDLLRSFSGGRLTSGSEWNMPKQGETNF
MWSAPDPSTGEHRPQGLYELGNAWANENMFTAEGIIWFRYHNYVASKLHEEHPESDEELFQNARKTTV
ATFQNIALYEWLPGYLGNKTLPPYPGYQQFVDPGISPEFEVAAMRISATMTPPGVYMRNRTCHFRNITNADG
STSPAIRLCNSFWKRQVINVKTGQDVEDLLMGMASQIAEREDNIVVEDLRDYMYPGLFRTRTDLVAMTIQR
GRDFGLQSYTEIRKALDLPPVETFEINPGLNRTNPQMLQAVAELYDGDISKLELFPGGLES LDGPGPVFSAI
ILDQFERIRNGDRFWFENKLNGLFTDEEIQEIRNVITYRDVLLAVTSADATDIQENVFFWKDGDPCPQAQLE
ASMLYPCTNATKLNFDGSKAGFGIFIIVLFVVSFLVACMVACLRKYRYKRFQRRRRIAGNGTEKPPVGI
PAFEWQGHSKQMCPISEVEKRRQLQVDRSGSTHRSNLGNQDCLDVLANDRQNKALLKVPKEYDLVL
FFEEESKRADFIKYLCELEKEIRQEIRVKELREKELLKEALTKEQRAQIVETFIRHAFSKVLEIQKCDAGMSG
VSPRRAREVLQCELTASEFADALCLKPDSLFDVSMFTLADKDGNGYLSFQEFLDVMVIFMKGSPEEKSLM
FSMNDVGGNGYLSKEEFARMLRSFIEISNGALSKTQAEDGIKAMMQAAGFNNKEQISWEDFHLLADHDKE
LQFAKLNKVGQTCIVKEVPLWMEKEGRKRLSQCQRVSFICPKKSVICFWLCLTVCSNKDKAEGLELRRRK
NTSIKTPNVYVKAQRQEYIRNPVQQKIQQFKRFIENYRRHIVCFIITYSITVGVTLERCYYYGLQAEATGVPGT
TVVGIIARGSAAGVSFLPYMLLTVCRLITLCRETFLNRFIPFDA AIDFHRSLAMTAVVLSVAHSLAHVVNI
YIFSISDLSILSCLFPKVLNNGSELPPKWYWWFLQTVPGITGVLLLLVLAFLMYVFASRYFRHISFRAFWITHY
LYIVVYILTVIHGSFALLQEPRFYIYLIPPSLLFLDKLISLSRKKVEIPVRAELLP SGVTHLEFKRPSGFVYRS
GQWVRIACLMLGADEYHPFTLTSAPHEETLSLHIRAVGPWTSQREL YTDESLELGSYPKLYLDGPFGEH
QEWVDFEVSVLVGGGIGVTPFASILKDLVFKSSIKSKFMCKKVYFIWVTRTQRQFEWVSDIIREVEEMDTQE
LVSVHTYITQVAEKFDLRTTMLYVCERHFQKVNRSFLTGLRSVTHFGRPPFVSFFNSLQEVHPEVGMGV
FSCGPPGLTKNVEKACQQMNKRQDQAHFIHHYENF

>fugu-Tr-Duox: DDBJ™ No. BR000283

EVPRFDGWYNSLASARRGAAGAHVRLTPARYWDGVYLPVQEPLMPNPRRLSSLLAGGPSGLAST
RNQTVLSLFFGYHITFEMFDSRTPGCPPEFMNIPVPKGDPVFDPTATGKVLLPFQRGPSDRDSGQN
PSNPRSQVNSVTAWLDGSSIIYGPSASWSDSLRSFSGLLASGSEWNMPRGGTHLHVERCRPLYRRT
WPSGPDELGNWANENFTAAEGIIWFRYHNYVASELHREHPGWSDEELFQKARRTVVATFQNTA
VYEWLPAHLGDKELPPYPGYQKFVDPGISPEFVAAAIRFGITMVPPGVYMRNKTCHFREVANADGS
SSPALRLCNSFWSRQSRNMKTSHDLDDLIFGMASQIAEREDNIVVEDLRDFMYGPLRFTRTDLVAV
TVQRGRDFGLRSYADVRNALDLPPVETFEDLNPELSSSNPKLLRDVADLYSGDISKLELFPGGLES
LSGPGPVFSAILDQFERLRNGDRFWFENRQNGLFTEEEIQKIRRTTFHRVLVKVTSAGAADLQEDV
FFWKDGDPCPQPTQLKESMLHPCTNATKLSYFDGSKAGFTVFILVLFVLPAGSSRGEEKLEAEQRN
QLWGPLVCNGCEMFNTKSALTNQMGVGFGAACEWQGHQKPLLPTVEVSEEKRVQVCDRSGAV
LRCFDLGVQDHLEVLSNNRHRKAALLKGSKERHLVLFVDNGPDVRFVQLLHQCSSDVGVKEMR
EEELLQEALTREQRAQIVETFIRHAFSKVLEIDKCDAGMSGVSRKKAKEVLQCELTAAEFADALG
LKADSLFVDSMFTLADKDGNGSLSFQEFLDVIVIFMKGSSSEKSSLMFSMNDIGGTGSLSKGEFAR
MLRFDPHFLFILAPVPITRPILPFCRSFIEISNCTLSKKQAEDAIGAMMTAAGFDHKEKITWEDFHF
LLRDHEKELHVRRPNVYVDPRRERYIRSPVRQKIQHFKRFVENYRRHIVCSALVYGMAAGLCLERC
YYYGFQAESTGLPETSVVGVVALARGSAAAVSFLFPYMLLTVCRNLTLCRETFLNRYIPFDAAIDFHR
FMAMAAIVLSVVHTLAHVNNIYIFSLSDLSILSCLFPKVFRRNNGSERPMKWSWWFFQTVPGTLGIL
LLFTLAFMYVFASRYFRRISFRGFWFTHCLYVVVYALTVIHGSYALIQEPRFHIYLIPPALLFLLDKLI
LSLRKLEIPVVRAELLPSGVTHLEFKRPQGFVYRSGQWVRIACLTLAGADEYHPFTLTSAPHEDTSL
LHIRAVGPWTSQRELYAEESVLRGLSEGRTEASPLMSMSPSAAVSITHALFPPKLYLDGPFGEHQ
EWDDYEVSVLVGGGIGVTPFASILKDLVFKSSAKSKIRCKKVYFIWVTRTQHQQFEWVSDIVREVEE
MDTQQLVSVHTYITQVAEKFDLRTTMLYVCERRFQKVWNRSLFTGLRSVTHFGRPPFLSFFNSLQD
VHPEVGKIGVFSCGPPGLTKNVEKACQRMNKRDAQAHFIHHYENF

> tetraodon-Tn-Duox: Ensembl No. GSTENP00025605001

EVPRFDGWYNSLASPRRGAAGSWLVRLMPAHYWDGVYQPVQEPVVRPNPRRLSRLLVGGGPSGLPST
RNQTVLSLFFGYHVTFEMFDSRTPGCPPEFMNIPVPKGDPVFDPTATGKILLPFQRGPSDKDSGQN
PSNPRTQVPYPDFNQKKVKEGVVIWTNTCFCFLKHVKVNSATAWIDGSSIIYGPSASWSDSLRSFSG
GLLASGSEWNMPRQAEGRTFMWSAADPCTGEHGPQGLYELGNSWANENIFTAAEGIIWFRYHNY
LASRLQQEHPAWSDEELFQNAKIVVATFQNTALYEWLPAHLGDRELPPYPGYQKFVDPGISPELVA
AAMRFGITMVPPGVYMRNKTCHFQEVVNLGSSSPALRLCNSFWSRRSPNMKTSQDLHLLFGM
ASQIAEREDNIVVEDLRDFMYGPLRFTRTDLVAVTIQRGRDFGLRSYTEVRNSLDLPPVGSFDDLNP
ELSSSDPKVKPTNQSSWEGQRLTNVLGVLSLRPRQLLRDIAELYNGDISKLELFPGGLESSESGSPGP
VFSAILDQFERIRNGDRFWFENRENRYVPLSQTFRANWGSRSRQRTLSHCRLFTEEIQQIRRTTLH
HVLVAVTSAEATDLQKDVFFWKDGDPCPQPTQLKESMLHPCANATKLSYFDESKAGFTVFILLFL
FPAVSFLVAYMVAYHRKYRKRKFQRTRKAGDRTAEPVGVAAACEWQGHKKPLLVRVEVSKGKVQV

SECSGSLLRFCNLSQDHLDDVLSNDRQRAALLKGSKEYDLVLFDDDEARRAAVVEHLHRGSAD
VRVKEMAEELLKEALTREQRAQVVFIRHAFSKVLEIDKCDAGDMSDVSRRKAKEVLQCELTA
GEFADALGLKPDSLFDVSMFTLADKDGNGYLSFQEFLDVIVIFMKGRSFLEISNCTLSKAQAEDGIR
AMMQATGFRKEKITWKDFHLLQDHEKELQFAQLNVKGMKRGQRRLSRDQRVSFICPASRWG
HWFSIIFNCNDHFNTSCSMSAASARRKYTRFADRKSQFLPNVFDPKREQYIRSPIRQKIQQFKRFV
ENYRRHIVCFIVVYGITAGLCLERCYFFQAESTGLPETSUVGVAFARGSAASISFLFPYMLLTVCR
NIITLCRETFLNRYVPFDDAIDFHRLMAMTAIVLAGWRSRYEGTHLRARKLTAASPPPVVHTLAHV
NIYFMSMDSLILACLFPKVFLLNNGSELPMKWSWVFFETVPGTAEVKMVNLSHRKMMMPVHPGCR
KATRTPILVLLLLGLTGILLFTLAFMYVFASRYFRRISFRGFWLTHCLYVLVYALTVVHGSYAFIQEP
RFHIYLIPPALLFLLDKLISLRKKLEIPVVRAEELLPSGVTHLEIKRPQGFVYRSGQWVRIACLALGA
DEYHPFTLTSAPHEGTLHLIRAVGPWTSRLRELYTQDSLQQLGAFPKADGPFGEHGEWDDYEV
SILVGGGIGVTPFTSILKDLVFKSSMKSIRRCPTVFFPNILKVYFIWVTRTQRQFEWSDVIREVEEM
DTQELVSVHTYITQVAEKFDLRTTMLYVCERHFQKVWNRSLFTGLRSVTHFGRPPFLSFFNSLQDV
HPKVGKMGVFCGPPGLTKNVEKACQRMNKRQDQTHFIHHYENF

>sea urchin-Sp-Duox: GenBank™ No. XM_001176709

MTPRDLRGPICVGLLLCMIALCSGQTENATTVMMMTEVTNGTTAAMMTEVTTVPTQTAQGPSTAQTTSST
DPPGTTTAPPVTPADEDEPIVNDNELLRSIGAFKDDSHSEPEGYDGWYNNLAHPDWGGAELPLTRRLPVSY
ADGVYAMAGKDRPNPMSISKATMQGETGQRSHLRRTALMTFFGQQVVEILDAQRGGCPREYENIKIPDGH
EYLKEKEGISIMPFVRSRYSFNTGYSPNVPREQLNEITPWFDDGLVYGTTKAWADALRSFKDGRADNGEIG
GEPQFPEQNTLGLPMANPPNPIAEGAARLQRSEFFKLGNPRGNENPFLTFGLVWFRWHNYWADKFKAET
DWEDERIFNEARKWVIATYQSVVYEWLPGYLNLENETAAEVEYSGYKGYIHPGITHEFQSAAMRFGHTLV
PPGVMRRENEQCVRFTSTMKSSGFTEQDEFSESQGNHGVRTNSFWNPQHSVREHDIEEFLGMSQVTER
EDNIITEDLQRRVFGPLEFSRRDLMALNIQRGRDHGLPDYNTARVSLGMDRRETFESINNASAHADGVETFD
SEVLNLRVYENDIDKVDIWAAGLLETTSNGPGELFRFIILDQFVRSRDRFVFNNSVSGQFTNDQIDFIK
KVKLWDIIVACTNINGSSLQKDPFHYTPDDPCYDQHPFEGENRTISENDMENCTKLQTFDYFEGSEVSYALS
LALGIWVVGVAVLLILAHIRQHSIQEARKLQHRKTRSRDPSSLKTYAAAEWCGKKEGSRQVQVKGPGKK
IRITNERGNKILRTVDLTHYTKVGLLVSPDGKRRHLVVKFDREYDIVLKFSDPDRLEFISDFESFLGSEEVGV
GRERQEIGEKELLKVAVTKEHRTKLEKFFLMAFSQAFKLDLDFPENLESLNNKETKDILECELTKTEFADVLT
MKPDSLFEQMFELVDQDNGSISFREFLDVIVVFAKGQPEDKLLMFNMYDIDRSGHLSREEFRQMLKSM
MEMVSASVEETDLKLIHDMFQNAAGLDKEALSDDFIAVMAEHKDELNNAKLDIAGNIPQIAGQKQDAGPP
GRGAATVIRRGNLNSRARQTIIRAYKDRDQASTKANGAAKAGAGSGGGVRKRAQSKSVRVETVQEEAKT
QSSKAYNTVVRFFENNRLQIFYVVLVLLVLAGVFIERAYYYSVEREFAGLRRIAGFGVSVTRGAASAMMFT
YSSLLVTMCRNTITKLRFLHRYVPFDSALNMHKLIALMLALFFSIMHTIGHSINFYHISTQTADDLTCYFRDF
FHRSHLPKFHYWAWGTITGFTGILLVMVCTVIYTFQYARRRVFNLFWFTHNMWIIYFILMFLHSGRVLV
QPPFTHYFALGPVLFVLDKLVSISRKKAEIAVTRAELLPSDVTMLEFKRPQGFYKSGQWVRIACKTSSSEY
HPFTLTSAPHEENLSLHIRAIGPWTMNLRTYDPNVVREHPLPKLFLDGPYEGHQDWYQYEVAVLVGGGI

GVTPFASILKDIVNKSTIGARVTCKKVYFIWVTRTQKHYEWLTDIIRDVEDNDTNDLVS VHIFVTQFFQKFDL
RTTMLYICERHFQKISNRSLFTGLKSITHFGRPQFTSFLQSLEDEHPGVGKIGVFSCGPPGMTGGVEQACVDL
NKFDGAAFIHHYENF

>ascidian-Ci-Duox-A: DDBJ™ No. BR000261 (Chromosome 1p: 60.95k)

LMFCCVIQFVVLINYNDSLVLGQVEVEKEYPPYDGWYNNRAHPEWGTVDGPLTRRLPSHYADGTYA
PSGGERPNPRTISENTMAGLTGQGSSTKRTALLVFFGQQVVEEILDAQRP GCPPEYFNIPKIPKGDPL
YDKTGQGNIELPFLRSRYDMSITGYSPNNPRQQLNEITPFIDGGLTYGINKAWADALRFQSKPTDCR
GELASYKNEGKFPPIENSLGLPLANPPPRDHNTYCIGLYWLG NPRGNENPFLLTFGVLWFRHHNW
LARYIRDKHSTWSDEKVYNEARILNIAIHQKIIFYDWLPLFLGECLPTYTYGYS AIHPGITHVFQSAA
MRIGHTLVPPGVYRRNTYNTTTKQCTFLNTTLKTAGDRHAFQALHV NKPGLRTCNTYWNSLEAVV
ESDIDQLLMGMSSQVAEKEDNIITPDLRGSVFGPLDFSRRDLMALNIQRGRDHGLPDYNTARASFG
LKKRTTFEEINPDLFAATPGLLGNLTATHDDDISKLDVWTGGLLET LSTGPGELFRHIIRDQFIRIRD
GDRFWYENSQNGLLTAEDLAFVQATTIRDVILRTNPTMNATYDIQNNPFQAAENDSSLYCPQPRQL
SELHMEECTEPESFDYFTGSEISYSLTFASFGLFIATILFMYCLGYRSEKRKLQMKKAINKHRSTQQ
REGDISDIATEVLGTTQSREVQIKLGPGLIHKSSSGRQNYRSIDLSKADDVRFVKAYNHGRNTMF
LRVDKDTHTDLILMFNDTEERDSFIARCKHFVHSHQISLSEQEVSHNELMDRAQTSEMRDQLLQRF
FKAALIAVSSIKVEDGDMSDVINSREARKFIHVELSKKEFADY LKLPNSLFDVQMFSSADSDGSGA
ISFREFLDIMVLFTKGSPEEKAKLMFNMYDLDKSGELSKKEFKVMLKSMMDMVNASVDSEQVEE
LVNTMLATHGYEHKESLTLEDFTVMQKYSTELSDASLTPGHYIALAYSFCCKIAFTVDSRKPCS
ARITSNKSKKNFFRN VVNCRLDYRKKFRICDTFKKNRTPETSRIQIKVYEKVF KPGRLNNWL RAME
NYVENHRLQIFWLTLYLLVLAGIFIERAYFYsverEFAGLRR IAGYGV SITRGAASAMMFTYTSLLVT
MCRNTITALRETFLHLYIPFDSAITMHRHIAWLALFFTG MHIIGHSLNIYAISTQTPGDLTCLFRDFWR
TSDVLPKFHYWCWQTITGITGVLLTLIVIVMYTFASDYSRRRVFQWFWWTHNFGYIFLFFMILHG
SGFLVQDPFFYYFFLGPAILYTLDKLYSVSRKCEISV VNAELLPSEVTHLEFKRPVNFNYKAGQWV
RIACLAQSQNEYHPFTLTSAPHEDTLKLHIRAVGPWTINLR SIYNPDVLRDSPYPKLYLDGPFGE GH
QDWYKYDVSVLVGGGIGVTPFASILKDLVSAQSGVKIQCKKVYFMWITRDQKQYEWLTDIIQEVES
KDASDLLDTHIFITQFPQKFDLRTTMLYICERHFQKVAGKSLFTGLRAVTHFGRPEFKSFFVSLTEE
HAEVEKFGVFSCGPPPMTSCVEQTC AKLNKYEGASF

>ascidian-Ci-Duox-B: DDBJ™ No. BR000262 (Chromosome 1p: 2.80M)

RRMDGWYNNLDHPQWGS PGERMIRRTNGYSNGINKPMEDGLPNPHTLSRLLMRGESGIPSVTG
KSVFLAFFAGQHVGDDMIDSRRNACPSEYINIEIEENKESNNHILPMYRSKFITGSGSSVNSPRMLV
NEATSWLDGSVIYGNSHSWSEHLRSFERGRLKEEDGHPGYP SFNRNEIPLYNPTIDLKRPKTRNP
EELLSFGNPRGNENPFLMTIEIHWFRWHNHLAEKIAVQNP DWSQQIFDKARKWTIATYQNI AFYE
WLPEIIGTSPPPYREYNKFMLPSVSVFEFSIAAMRLGHSLVPSGVVLRQPDCSPIDPLPEDY LASAGEP
ALRLCNTYWQLQDALLDLGIEGIVLGMTSQNAEEEDAVVDDLAGFLYGPLKRTRMDLEAMTIQR
GRDAGLQRYNEVRKTYDLPPITDFSQLNPSLPNEVIARLRNAYNNDTNKLELYVAGMMEDRSNAS

NVLFYKIILEQFQRTRDGDRLWFENAQNGLFNASELQEIRQTTMRDIAATTTFNRSLFQPNVFNTA
GSRCASITVRKDMFSKSCPTNTGIDFFYGYWGKYAGIVLLLLLFPFVSYFVMCMIAWKRQYDLAKA
KKIATQKVTRRKSSSQNEAEIESEDGAVFSGGQDKSRRVVVMLEGTCIKLFSSAGRELRKICFSHF
KSFLFMSRNKRKDLIVIRVPKEYDVVLRFNDSLERVEAIKNVQEFMQHNGVNVDFEMDESALKE
EAVTKEARQALLETFLRQTFAEALNIDDAVEQNSKAKYRHKTEVADCELTQMELAETMGMKPDS
LFVTQMFQLADTDHSGYLSFREFADLILLMNGSPEQKAKMLFDMYDVDHSGEINREEGRNMIKS
FLEMAGANLGPDEVSAAVSTIFKEAGIGENKDSLTLLEDFTYVLLKDHREAFESSELSMPGRSNLYK
DQGELSEQNKMSDQRRVDKAKIIFYQKMVQSNQKVFSDATVSHEEKTWFARTWKYLKRNVENYR
RHIFCMVIFYGITIALVVERATFFYAFGAEHIGIRRVTEWGHISRASAAAISFHFSFILLTMSRNLITTCR
ETFLKNFIPFDSAVAFHKQIAYVALVETIFHVLGHASNFYHFCVHPLPVLACLFPKIFVDDGSDLPKS
LTWWFFETITGLTGVLLLLTISIYVFAMQYSRRFCFRAFWITHHLYTVLYILTILHGSLGIVQAPVFH
FYLVVPPVIFLIDKMITISRSKVQITVIKAEALPSGVNLVFKRPVAFDYQSGQWVRIASLSLGTNEYH
PFTLTSAPHERYLSLHIRSVGPWTSNLRNLYQTAVEHQGKLPNLYLDGPFGEHGDWYKYEVSVLV
GAGIGVTPFASILKDIVNRTSTKKGSHIPCKKIYFVWTRTQRHFEWLTDIIRELEETAGGDLVSTHIY
ITQFANKYDLRTTMLYICERYFQKVANKSMFTGLKAITHFGRPQFEAFDSLQTKHKEVRTLGVS
CGPPGLTNGVEDACRNLNKLNKARFNHFYENF

>ascidian-Ci-Duox-C: DDBJ™ No. BR000263 (Chromosome 2q: 2.08M)

QQEIGKEFPFNGWYNNRGNPSLGIPDSSLTRSLPHYKDGVEPSGWERPNVRSISNLIFSPPQG
LPSTNNKTALFLFFGEHVMQDILDTSRPGCPPEYFNIMLNASDSHFSTTEMPYERSSYQASNTGYS
PNHPREQINAVTSYLDGSGIYGHTKAWSNLRLLRSTCNGRTSTSSLSIGSRRGNENPFVLTIGIT
WFRHHNWLARNIRDSNPWSDDDVFNEARIQNIAMYQKVLMEWLPGLLGTCSLNQTYSSGTS
ASVSDIFEGAARHFLSTITPPGVFVRSKFNESCEFRTTSATSPALSCLNSYWEPVKIFASIDGLTMG
MASQIAELEDNVITPSLRHNYGSRRFSRRDLMATILQKGRDHGLPDYNKVLMEWLPPELLGTCS
SLNQSQCLNVTPYTGTLYQEFTFFVINWWFVRDHRGSPGELFRYVIADQFLRLRNGDRFWFENV
KTSLLSSTKLNEILNTTFRDVILRTNPTINGSFDIQDNPFWATGDSKLFQPYQLTENVLEECTPL
QRYDYFTSSEVSFPLSFAFFGVFALITLLVMYLVGRQRMKSALKTKKDITTKKRATITTSIASGNVTIC
TEILEFFVKTVYLEYGCVHAIMYHEVFDIYVLSFNDSYELDEFFNELHNFVKPLGLKCNFPAIPEK
HIMEEARTKEMRDKQLQNFRTALSQAMNIESEDLRPKRKTLDLVKVNITKSEFAEYLKLED
SLFVEQMFLVADSDEDGTISFREFLDIIVLFTKGTPEKAQLMFNMYDLKSGGLSKEEFTTMLKS
MEMVNSSADVNDIDSVDMMRANGFSSKDSLNDLFLMLLGQYSDISNQQSTSNHGKTYQAK
RQSKYHRYSKRFKEGYVCLLHCIKSMFTKLYITHRPQTPQRRLTRKVKTVREYKTKSYEKFFVAL
VKLTEHYANHIFCLSLYLITAGVFLNAFFVVYSKYATGLYGIGPLMALARASAAALMFNFSTLLLT
MCRNIITFLRETFLHRFIPFDSAVTMHRIVAWMALAFTALHILAHGINFYIVTQSPDDMACLFRDM
WYPSDYIPTFVFWLQFQITGITGVILTALIVMYVFASNYARRMIFNWFRWTHKLGYSLSYFFSFVH
GSGMLISSPQFYFFLVPGILFTLDKVYTYSRKKAYISVVRAELFSPDVTHLEFKRPKNFDYKAGQW
VRIACLAQSSSEYHPFTLSSAPHEDTLKLHIRAVGPWTRNLRNIYDPNVLRDSPYPKFLFDGPFGE

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GKDKKQILNTHIFITQFPQKFDLRTKMLYICEENFQKIAGKSLFTGLRAITHFGRPDFPDFVTLGE
EHSSVETFGVFSCGPPPMTEGVEKACAKLNKYEGPTFSHHFENF

>ascidian-Ci-Duox-D: DDBJ™ No. BR000264 (Chromosome 1q: 5.10M)

RAADSKEYPSFNGWYNNLANPSSGATETALTRRLKSHYEDGVYAPSGSGRPNPRTLSVEIASGPSG
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VVPVYHEMRNAKRLFATGSRTGNENPFLTIGVTWFRHHNWLARQLRDNNPDWSDEHVFMESTR
RNIATYQKVFFYEWLPILLGSCPSFPIIPFFKWTGYHASVPVGVSNVQSAAMNYLDTMVPPGGFIP
KTFDRFVLEASINSDMDKWRTCNTYWNSEDLFENATPFNIVYGMGMQMAESEDHIISEDLRNSF
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DIYVGGMLESKDRPGELFRSILEQMVRLRDGDRFWFENLNGLFTVDQVNGIFNVTFDVLRLRT
YPELNLAGNTAFNPFWKS NKHICRQPYQMTGDNMTSCTTMQRQDDFNHNQISFLAIFCGVFFAI
ACVIFMIYVGSWKEDKRNKEKTKTTSTYSEQDAFTAKEILGRKRHERKDVQVQFAFTYYIQVITQE
NNTTHITHITESEEVIMYTD SGKRKKMLLRCAKRTYDLILAFTGSSERDIFLTKLRLFFKQNDILW
KERAIHEKHFFEEANTKDERDTELSNFYQAVIAQSMRMEFGIQISSFPENLVDIKLSQEEFASLLQM
KSSSLFVQHIFTTAEDEDQDGFISFHD FRKIIVLFVKGSPNEKLRLLFDMFDLNQNGSLTKQQFKEM
FVCLADTYQSTVDQNVLENVLSKIVPPKNDEEIQYLNFD DFKKLMDLPEMDEAMLNLTAPGRVILL
LGQNYRFSNQQKFFTISKILKNCHYNNKMKFPTFLQIQFEAIKQLDLEITGSQMFIFIGKNKKNVYF
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AALMFNISTLLLTMCNILTSLRETQLHLYIPFDAAVAFHKLVAWMALFFTALHIIAHGINFYSIQTQT
PSDLLCLFRDLWFPSDYRPTVFWCLQTLTGNTGVLLTIHIVMYVFSLDYPRQVMFNWFQWIHFF
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SDFYYKAGQWVRIACVGLSKWEYHPFTLSSSPDEETLQLHIRAVGPWTRNIRNIYKEGEPYPKLYV
DGPFGEGHQDWYKYEVAVLVGGGIGVTPFASILKDLVNKSTVGVGIPCKSVYFLWVARDQRQFEWL
LDIIEETEKN DALGILS'THIFITEIPNKFDLRTTMLYVCEQHFKKVSEKSMFTGLNAVTHFGRPNFP
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>nematode-Ce-Duox1: GenBank™ No. NM_058285

MRSKHVLYIAILFSSIFGGKGIQQNEEFQRYDGWYNNLANSEWGSAGSRLHRDARSYYS DGVYSVN
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CEGKTEIPFTRAKYDKATGNGLNSPREQINERTSWIDGSFIYGTTPWVSSLRSFKQGR LAEGVPG
YPPLNNPHIPLNPPAPPQVHRLMSPDRFLMGLDSRVNENPGLLSFGLILFRWHNYNANQIHREHP
DWTDEQIFQAARRLVIASMQKIIAYDFVPGLLGEDVRLSNYTKYMPHVPPGISHAFGAAA FRFPHSI
VPPAMLLRKRGNKCEFRTEVGGYPALRLCQNWNAQDIVKEYSVDEIILGMASQAERDDNIVVE
DLRDYIFGPMHFSRLDVVASSIMRGRDNGVPPYNELRRTFGLAPKTWETMNE D FYKKHTAKVEKL
KELYGGNILYLDAYVGGMLEGGENGP GELFKEIHKDQFTRIRDGDRFWFENKLNGLFTDEEVQMI

HSITLRDIIKATTDIDETMLQKDVFFFKEGDPCPQPFQVNTTGLEPCVPFMQSTYWTDNDTTYVFT
LIGLACVPLICYGIGRYLVNRRRIAIGHNSACDSLTTDFANDDCGAKGDIYGVNALEWLQEEYIRQVRI
EIENTTTLAVKKPRGGILRKIRFETGQKIELFHSMPNPSAMHGPVLLSQKNNHHLVIRLSSDRDLSK
FLDQIRQAASGINAEVVIKDEENSILLSQAITKERRQDRDLDFREAYAKAFNDSELQDSETSFSSN
DDILNETISREELASAMGMKANNEFVKRMFAMTAKHNEDSLSFNEFLTTLREFVNAPQKQKLQTL
FKMCDLEGKKNVLRKDLAELVKSLNQTAGVHITESVQLRFLFNEVLHYAGVSNDAKYLYDDFNAL
FSDIPDKQPVGLPFNRKKNYQPSIGETSSLNSFAVVDRSINSSAPLTLHKVSAFLETYRQHVFIVFCFV
AINLVLFFERFWHYRYMAENRDLRRVMGAGIAITRGAAGALSFCMALILLTVCRNIITLLRETVIAQY
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TGLTGIALVAVMCIYVFALPCFIKRAYHAFRLTHLLNIAFYALTLLHGLPKLLDSPKFGYVVVGPVIL
FVIDRIIGLMQYYKLEIVNAEILPSDIIYIEYRRPREFKYKSGQWVTVSSPSISCTFNESHAFSIASSP
QDENMKLYIKAVGPWTWKLRLSELIRSLNTGSPFPLIHMKGYPYGDGNQEWMDYEVAIMVGGAGIGVT
PYASTLVLDLQRTSSDSFHRVRCRKVYFLWVCSTHKNYEWVFDVVKNEVDQARSGILETHIFVTQT
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>nematode-Ce-Duox2: GenBank™ NM_058283

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QVPLCDNVFDNECEGKTTIPFYRAKYDKATGNGLNSPREQINERTSWIDGSFIYGTTPWVSALRS
FKQGRLAEGVPGYPLNPHIPLNPPAPPQVHRLMSPDRLFMLGDSRVNENPGLLSFGLILFRWH
NYNANQIYREHPDWTDEQIFQAARRLVIAASMQKIIAYDFVPGLLGEDVRLSNYTKYMPHVPPGISH
AFGAAAFRPHSIVPPAMLLRKRGNKCEFRTEVGGYPALRLCQNWNAQDIVKEYSVDEILGMAS
QIAERDDNIVVEDLRDYIFGPMHFSRLDVVASSIMRGRDNGVPPYNELRRTFGLAPKTWETMNE
FYKHTAKVEKLELYGGNLYLDAYVGGMLEGGENGPGEMFKEIKDQFTRIRDGDRFWFENKL
NRLFTDEEVQMIHSITLRDIIKATTDIDETMLQKDVFFFKEGDPCPQPFQVNTTGLEPCAPLIQSTY
WDDNDTTYIYTLIGLACIPLICYSIGHYVERRIRIGHNSACDSLTTDFSTESPKVNVYKVNALAWL
QEEYIRQVRIEIENTTTLVKKPRGGILRKIRFETGQKIEVFHSIPNPSAMHGPVLLSQKNNHHLVIR
LSSDRDLSKFLDQIRQAASGINAEVVIKDEENSILLSQAITKERRQDRDLDFREAYAKAFNDSELQD
SETSFSSNDDILNETISREELASAMGMKANNEFVKRMFAMTAKHNEDSLSFNEFLTTLREFVNA
PQKQKLQTLFKMCDLEGKKNVLRKDLAELVKSLNQTAGVHITESVQLRFLFNDVHLKSGVSDDAEY
LTCNNFDALFSEISDVQPIGLPFNRKKNYNSHIKEPSCHTSFPVVDHSTPAPLSLIQRICAFLETYRQH
VFIIFCFVAINIVLFFELFWHSRYLNEDRDLRRVMGAGIAITLSSAGALSFCMALILLTVCRNIITLLR
ETVIAQYIPFDSAIAFHKIVALFTLFWSTLHTIGHCVNFYHVGTSQSDRGLACLFQETFFGSDVVPVTL
YWFYGTITGLTGIGLVIVMSIYVFALPKFTRRAYHAFRLTHLLNIGFYALTILHGLPSLFGSPKFGY
VVGPIVLFVIDRIIGLMQYYKSLDIAHAEILPSDIIYIEYRRPREFEYKSGQWITVSSPSISCTFNESHA
FSIASSPQDENMKLYIKAVGPWTWKLRLSELIRSLNTGSPFPLIHMKGYPYGDGNQEWMDYEVAIMV

GAGIGVTPYASTLVDLVQKTSSDSFHRVRCRKVYFLWVCSSHKNFVFDMLKNVENQAKPGILE
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>fruit fly-Dm-Duox: FlyBase No. CG3131

MYSQTEKQRYDGWYNNLAHPDWGSVDSHLVRKAPPSYSDGVYAMAGANRPSTRRLSRLFMRGKD
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DTGQSPNAPREQINQMTAWIDGSFIYSTSEAWLNAMRSFHNGTLLTEKDGKLPVRNTMRVPLFNN
PVPSVMKMLSPERLFLGDPRTNQNPAILSFALFLRWHTLAQRIKRVHPDWSDEDIYQARHTVI
ASLQNVIVYEYLP AFLGTS LPPYEGYKQDIHPGIGHIFQAAA FRFGHTMIPPGIYRRDGGQC NFKETP
MGYPAVRLCSTWWDSSGFFADTSVEEVL MGLASQISEREDPVLCS DVRDKLFGPMEFTRRDLGAL
NIMRGRDNGLPDYNTARESYGLKRHKTWTDINPPLFETQPELLDMLKEAYDNKLD DDDVYVGGM
LESYGQPGEFFTAVIKEQFQRLRDADRWFWFENERNGIFTPEEIAELRKITLWDIIVNSTDVKEEIQK
DVMWRTGDPCPQPMQLNATELEPCTYLEGYDYFSGSELMFIYVCVFLGFVPILCAGAGYCVVKL
QNSKRRRLKIRQEALRAPQHKGSDKMLAREWLHANHKRLVTVKFGPEAAIYTVDRKGEKLR TFS
LKHIDVVSVEESATNHIKKKPYILLRVPSDHDLVLELESYGARRKFVKKLEDFLLLHKKEMTLMEV
NRDIMLARAETRERRQRLEYFFREAYALTFGLRPGERRRRSDASSDGEVMTVMRTSLSKA EFAAAA
LGMKPNDMFVRKMFNIVDKDQDGRISFQEFLETVVLF SRGKTDDKLRIIFDMCDNDRNGVIDKGE
LSEMMRSLVEIARTTSLGDDQVTELIDGMFQDVGLEHKNHLTYQDFKLMMEKEYKGFVAIGLDCK
GAKQNFLDTSTNVARMTSFNIEPMQDKPRHWLLAKWDAYITFLEENRQNI FYLFLFYVVTVL FVE
RFIHYSFMAEHTDLRHIMGVGIAITRGSAA SLSFCYSLLLL TMSRNLITKLKEFPIQQYIPLDSHIQF
HKIAACTALFFSVLHTVGHIVNFYHVSTQSHENLRCLTREVHFASDYKPDITFWL FQTVTGTTGVM
LFIIMCIIFVFAHPTIRKKAYNFFWNMHTLYIGLYLLSLIHGLARLTGPPRFWMFFLGP GIVYTLDKIV
SLRTKYMALDVIDTDLLPSDVIKIKFYRPPNLKYLSGQWVRLSCTAFRPHMHSFTLTSAPHENFLS
CHIKAQGPWTWKL RNYFDPCNYPEDQPKIRIEGPFGGGNQDWYKFEVAVMVG GGGIGVTPYASIL
NDLVFGTSTNRYSGVACKKVYFLWICPSHKHFEWFIDVLRDVEKKDVTNVLEIHIFITQFFHKFDLR
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>honeybee-Am-Duox: DDBJ™ No. BR000285

VHSYADKQRYDGWYNNLAHPDWGSIAVDSRLIRKMPAAYS DGVYMLAGQDRPSPRKLSQLFMQG
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RQTGRSPNSPREQINKVTSWIDGSFVYSSSEAWANTMRSFKNGSLLMEPTRKFPVRNTMRAPLFN
HAVPHVMRMLSPERLYLLGDPRTNQHPPLLAGILFYRWHNVIAARIQLENPTMSDEDIFQKARRV
VIGTLQQNIILYEYIPILLNEDLPPYTYGKSDLHPGISHIFQSA AFRFGHTLIPPGLYRRDENCEYRRT
NTDQPAIRLCSTWWD SNEVL TNSTIEELLMGMTSQAIEKEDNLLGTDIRNNLFGPMEFSRRDLGAL
NIMRGRDNGLPDYNTARAHFKLPRKKTWNEINPELFNKNP SLLR TLVEIHSNNLNMDVYVGGM
LESSAGPGELFSTVIKEQFLRLRDSDRWFWFENEENGIFTRSEIADIRRITLWDVIVNATGIPADSIQRK

VFTWEEGDPCPYQLNSTMLEPCVPLQRYDYFEGSELVYIYACVFLGFVPILCAGAGYGLVKLQN
RRRRRLKILQEAIQKRNDGKICVDKMIVREWLHANHRLVKVKFGPEAALHIVDRKGEKLRTFDF
NDVNTVTMEESQENENGRKPLVLLRIPRDYDLVLELDSLARRKFIKLEAFLASHKKHFTLSQV
SRDIMLAKAETKERRQKKLEQFFREAYALTFGLRPGERRRRSESDSDSGEVVTVMRTSLSKSEFASA
LGMRAVAVFVKMFNIVDKDRDGRISFQEFLDTVLLFSRGKTEDKLRHIFDMCDKDCNGVIDKEEL
SEMLRSLVEIARTTSLSDDHVTELDGMFQDAGLERKDYLTYNDFKLMKEYKGFVAIGLDCKG
AKQNFLDTSTNVARMTSFHIDQLPPEDSKTWAQKQWDAISTFLEENRQNIYFLVYVTTIALFVE
RFIYYSFMAEHTDLRHIMGVGIATRGSAAALSFCYSLLLLTMSRNLLTKLKEFSIQQYIPLDSHIQF
HKIAACTALFFSVLHTVGHMVNFYHVSTQPLAHLRCLTSELSPSDARLTISFWLFRVTVTGLTGILL
FIVMTIIFVFAHPTIRQKAYKFFWSTHSLYVVLYALCLIHGLARLTGSPRFWIFFVGPAAIYALDKVVSL
RTKYMALDIIETELLPSDVIKIKFYRPPNLKYLSGQWVRLSCTAFRSNEFHSFTLTSAPHENFLSCHI
KAQGPWTWKLRYFDPCNYNPEDEHPKIRIEGPFGGGNQDWYKFEVAVMVGGGIGVTPYASMLN
DLVFGTSTNRYSGVACKKVYFLWICPSHKHFEWFIDVLRDVERKDVTDVLEIHIFITQFFHKFDLRT
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CDEVNKGRRLPYFIHHFENFG

>mosquito-Ag-Duox: DDBJ™ No. BR000284

LMSHVEKQRYDGWYNNLAHPDWGAVDNHLTRKAPSAYSDBGVYVMAGSNRPSRKL SRLFMRGTDGLPSM
ENRTALLAFFGQVVTNEIVMASESGCPIEMHRIEIEKCEMYDRECRGDRYIPFHRAAYDRNTGQSPNAPREQ
INQMTAWIDGSFIYSTSEAWLNAMRSFQDGALLTDKQGTMPVKNTMRVPLFNNPVPHVMRMLSPERLYLLG
DPRTNQNALLSFAILFLRWHNVVAKRVRQRHRDWSDEEIFQRARRVVIASLQNVAYEYLPALFDKEIPPYDG
YKADTHPGVSHMFQAAAFRFGHSLIPPGLFRRDGCNFRRTNMDFPALRLCSTWWNSNDVLDNTPVEEFIM
GMASQIAEKEDPLLCSVDKDFGPMEFTRRDGALNIMRGRDNGLPDYNTARAAYRLPKKKSWRDINPAV
FERQPELLDLIKTYDNQLDNVDVYVGGMLES DGRPGELFSAVIIDQFTRIRDADRFWFENEDNGIFTKEEIA
EIRKFTLWDIIVNSTDIEADEIQRDVFWKQGDPCQPEQLNATLLEPCNYLEGYDYFSGSELAYIYSCVFLGF
VPILCAGAGYCVIKLQNSRRRKLKIKQEAMKNTANTKVSVEKMVAREWLHANHKRLVTVKFGPEASIYTVD
RKGEKLRTFNLKHVDVVTVEQSQENY TAKKPYILLRVPNDHDLVLELESNSARRKFVKKLEDLVLHKKTM
TFVESNRDLMLAKAETRERRQKRLHFFREAYALTFGLRPGERRRRSDASLDGEVMTVMRTSLSKSEFAAAL
GMKQDDMFVRKMFNIVDKDKDGRISFQEFLETVVLF SRGKTDDKLRHIFDMCDNDRNGVIDKGELSEMMS
LVEIARTT SVTDEQVNELIDGMFQDVGLEHKNHLYEDFKLMKEYKGFVAIGLDCKGAKQNFLDTSTNV
ARMTSFHIEPISDSRRHWMQEKWDCYTTFLEENRQNIYFLVYVITIVL FVERFIHYSFMAEHTDLRHIMGV
GIAITRGSAAALSFCYSLLLLTMSRNLLTKLKEFPQQYIPLDSHIQFHKIAACTALFFSLHTVGHIVNFYHVST
QSIENLKCLTKEVHFTSDYRPDITYWLFQTITGTGVMLFVTMCIFAFHPTIRKKAYKFFWNAHSLYVVLY
ALCLVHGLARLTGAPRFWFFIGP GIVYTLDKIVSLRTKYMALDVIETDLLPSDVIKIKFYRPPNLKYL SGQW
VRLSCTEIKPEEMHSFTLTSAPHENFLSCHIKAQGPWTWKLRYFDPCNYNPDQPKIRIEGPFGGGNQDWY
KFEVAVMVGGGIGVTPYASILNDLVFGTSTNRYSGVACKKVYFLWICPSHKHFEWFIDVLRDVEKKDVTNVL

EIHIFITQFFHKFDLRTTMLYICENHFQRLSKTSMFTGLKAVNHFRPDMSSFLKFVQKKHSYVSKIGVFSCGP
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>fungus-Pa-NoxA: GenBank™ No. AF364817 (initially termed Nox1)

MGGLVPLLKQLTGSKILFHILFWTFHWGIFAYGWKQAADARLAGLNTLQYSVWLSRGAGLVLSVDGM
LILLPVCRTIMRFIRPKIKFIPLDENIWMHRQLAYSMLLFTIIHTAAHYVNFYVNEKTQIRPVTAVQIHVYVQPG
GATGHVMLLCMLLMTTAAHHRIRQQSFETFWYTHHLFIPFLLGLYTHTVGCFVRDTADAISPFAGDEYWEH
CIGYLGWRWELWTGGFYLIERLYREIRAIRETKITRVVVKHPYDVVEIQFNKPSFKYKAGQWLFLQVPSVSKY
QWHPFTITSCPYDPYVSVHIRQVGDFTRELGNVAVGAGGIHAKLYEGVDPLGMYDVALANGQKMPALRIDG
PYGAPAEDVFENEIAVLIGTGIGVTPWASILKNIWHLRNGPNPTRLRREVEFIWVCKDTSSFEWFQTLSSLEE
QSAEAARVPGSSGVFLKIHTYLTQKLDMDTTQNIVLNSVGSVDPLTELKARTNFRPNFGRIFQSMSEIGQ
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> fungus-Pa-NoxB: GenBank™ No. AY372210 (initially termed Nox2)

MSGYGGYDGGLRSSGSMKQSERSRWTPLTRMLLSGEMTQERQKELTPREKFDKWMVNEGYRRIFVVFVFMF
LHAILFAFSFVNFVAVKENLQIARDTFGPTFMIARSAALVLHVDVALILFPVCRTLISMARQTPLNHIIQFDKNIT
FHITTAWSIVFWSWVHTIAHWNNFAQVAAKNNLGIYGWLLANFVSGPGWTGYVMLIALMGMVITSVEKTR
RANYERFWYTHHMFIVFFFFWSIHGAFCMIQPDFAPFCISIGTQAIGVFWQYWMYGGFAYLAEVAREIRGR
HKTYISKVIQHPSNVCEIQIKKEHTKTRAGQYIFCCPAVSLWQYHPFTLTSAPEDYISIHMRVVGDFTRAV
AETLGCEFDKKGDKASKVVGVDQSNDEVPALRRVLPVRYIDGPFSGASEDVFKYEISVLCGAGIGVTPFAS
ILKSIWYRMNYPQKRTRLSKVYFFWICRDFGSFEWFRSLLAIEAQDVDNRIEHTYLTAKIKVDDATNIMIN
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> fungus-An-NoxA: GenBank™ No. AY174088

MGRYPLKSYFAPSKLFFYTWFVGAHIAIFAYGWYHQAKSEPLSPLNVLSSVWISRGAGLVLTVDGTLILLP
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TGHVMLFCMMLMYTAAHHRIRQQSFETFWYTHHLFIPFLLGLYTHATGCFVRDSAEPYSPFAGERFWKHCI
GYQGWRWELVAGFFYLCEWLREIRALRETEIVKVVHRPHYDAMEIQFRKPGFKYKPGQWLFIQVPEVSNTQ
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QSASDAAYQGVSEFLRIHIYLTQRLDQDTTNIYLNLSVGQELDPLTELKSRTNFRPDFKRLFTAMRNLQD
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> fungus-Mg-NoxA: GenBank™ No. EAA49092

MSVGEFLAKQLTAQKLFNFISFWGFHIGIFAYGWYKQFSDPRLAGLNTLTFVSVWISRGAGLVLSVDGMLILL
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HMMLLCMLLMTTAAHHRIRQQSFETFWYTHHLFIPFLLGLYTHTVGCFVRDTVEPHSPFAGDEYWNHCIGY
LGWRWELWTGGFYLLERLYREIRARRETKITRVVRPHYGEFFFLFLLFGPSMVGFVSVLIRDSADVVEIQFN
KPSFKYKAGQWLFLQVPSVSKYQWHPFTITSCPYDPYVSVHVRQVGDFTKALGDATGAGAAQAKLYEGVD

PMGMYEVALQNGQQMPLRIDGPYGAPAEDVFENEIAVLIGTGIGVTPWASILKNIWHLRNGPNPTRLRR
VEFLWVCKDTSSEFEWFQTLSSLEQQSTDAAGLPGGNGVEFLKIHSYLTQKLDMDTTQNVLNSVGAALDP
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RFWKEHF

> fungus-Mg-NoxB: GenBank™ No. EAA56588

MSGYGYGGGGGFRDSYGSEKQGSERSRWTPLTRMLLSGEMTQERQKELTPREKFDRWMVNEGYYRRFFV
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QFDKNITFHITTAWSIVFFSWVHTVAHWNNFAQIAAQKLGWLLANFVSGPGWTGYVMLIALMGMVF
TSVEKPRRANYERFWYTHHFFIVFFFFWSIHGAFCMIQPDFAPFCMSFGTSAIGVFWQFWMYGGFVYMAERI
AREIRGKHKTYISKVIQHPSNVCEIQIKKEHTKTRAGQYIFFCCPEVSVWQYHPFTLTSAPPEEDYISIHMRVVG
DFTRGVSKALGCDWDRKGDASKVVGNGENPDVDPALKRVLPRVYVDGPFSGASEDVFKYEIAVLGAGI
GVTPFASILKSIWYRMNYPQKKTRLAKVYFFWICRDFGSFEWFRSLLAIEAQDNDRIEHTYLTAKIKADD
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FVWGKENF

> fungus-Mg-NoxC: GenBank™ No. EAA57330

MAKSTTTDGENVKANSENGSTAAASPNDHVKIEPSTKDKGEDKPKAADARDDGSEAEARADQHPEKPAQ
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FRRVRAYWAVHGPEIAFLGIVVGLQLGLGIWQCHKYASGEQYQAAFGWGVALAKLCAGALYPTFFLILS
MSRYSTFLRRSYHLRSFINWDLSEQEFHIKISIVALVLASLHALGHLSGTFNWGSRPERQDAVGVLLGEDQVP
RPYSAYVSSLPGITGLTALGLFYTLALLSMPQVRRWNYEVFQLAHLMLFPIIGLLAAHGTAQLLQYAMFGY
WLA VPTILVLTERLVRVGTGFHRIPASLKVLDDETVELRATIPSERIWKYQAGQWAYLQVPTISMWQWHPF
TISVCVGKEMRMHIKTDGNWTGRLRDLAKDAPQGQEV DIEINGPFGAPAQRFYDFNHTILVGAGIGLTPF
SGILADLQAKEDRLHGGPTQKLQEQAEGGDVVRGSTSADAPDGRRIGTSREAEAMPQRTD VDMQAPTSGD
QSNTTLQETADADSDSASSISRPSSSFSSASDYRRVDFHWMVRDRNHLLWISSELLNTVSRSAWHHRHDAP
GEYHLDIRMQTHVTQKRKNVSTHVYRWLLEQHRTPEHPASPITGLINPTQFGRPDFVSILDRHYDDMRKYK
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> fungus-Fg-NoxA: GenBank™ No. XM_380915

MGSQLGFVELIKKQFVPGKLLYHFLFWTFHWGIFAYGWKQAVDPRLAGLNTLKFSVWISRGAGLVLSVD
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> fungus-Fg-NoxB: GenBank™ No. XM_390983

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>fungus-Fg-NoxC: GenBank™ No. XM_391371

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>alga-Cc-NoxD: GenBank™ No. AAZ73480 (insertion of TM7-TM10 in Nox domain, underlined)

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LSYMGRSRRFRTVGRTLDFVFLPLTITSASLGKALVTERTDEQIVFLHYIVFLPLTFVLLAVRMYRALGKRT
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>alga-Py-NoxD: GenBank™ No. ABA18724 (insertion of TM7-TM10 in Nox domain, underlined)

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>At-rbohA: GenBank™ No. NM_120821

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VTETDRKNVIELHNYCTSVYEEGDARSALITMLQSLNHAKHGVDVVSCTRVMESHFARNWRSVFK
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>At-rbohB: GenBank™ No. NM_202070

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NEVAEYDSEGMIELHNYCTSVYEEGDARSALITMLQSLHHAKSGIDIVSGTRVRTHFARPNWRSVF
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>At-rbohC: GenBank™ No. NM_124485

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MNEVAERDANRVIEMHNYCTSVYEEGDARSALIHMLQSLNHAKNGVDIVSGTRVMSHFAKPNWR
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>At-rbohD: GenBank™ No. AF055357

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>At-rbohE: GenBank™ No. NM_101781

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>At-rbohF: GenBank™ No. NM_105079

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>At-rbohG: GenBank™ No. NM_118641

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>At-rbohH: GenBank™ No. NM_125394

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> At-rbohI: GenBank™ No. AL161531

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>At-rbohJ: GenBank™ No. NM_114450

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>amoeba-Dd-NoxA: GenBank™ XM_630972

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>amoeba-Dd-NoxB: GenBank™ No. XM_632294

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PDDPFISVHINIVGNWTRKLFKLLNPDNKLGLIQEDLKSTQNRGKRRILKIDGPFGAPAENFFKYRNVLV
IGAGIGVTPFSSILRHLKNQNDKQTNADENHLKINKIYFIWISRQKNSFQWFTDILAELENDERIDS

LEIHIFLTGALELDDYAKIKNAQKCHITNLHSKTLFGRPNFRSIFNQLTQLHQREKIGVFYCGNKAL
GKNIKNCNKFNGKNNCHLIFHKENF

>amoeba-Dd-NoxC: GenBank™ XM_630295

MEKQKNISIKKFANPLSFPHEFRTNLHKSTFLDASLLELPNISVDKTKNENNFSITDKILMESLKENEFKIREFI
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NSKLNNDKIDDKNDNYIDKINDINNFNSDIEEIFKKEIENTLKIPIGGNSFPIPVFNNNNNNNNNNNNNN
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VHANNKRAIELFGPGVYITRIAAQLIEFNAAILMTMCKQLFTMIRNTKFKFLFPVDKYMTFHKLIGYTLIASF
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