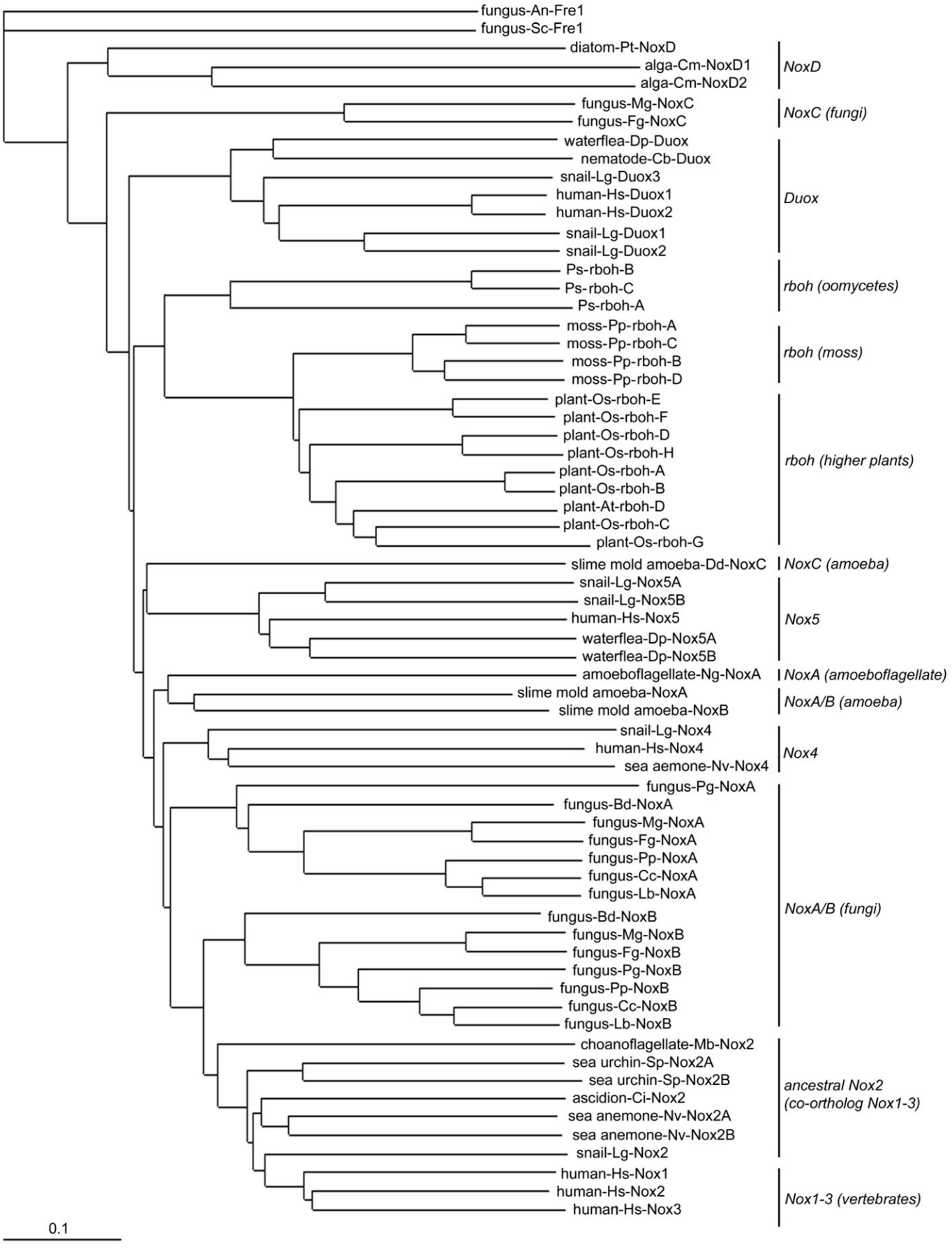
Additional File 6

Molecular taxonomy of Nox domains of the selected Nox and Duox protein sequences containing newly identified sequences. The following naming was used to describe species of the sequences: *Caenorhabditis briggsae* (nemotaode-Cb), *Daphnia pulex* (waterflea-Dp), *Lottia gigantea* (gastropod snail-limpet-Lg), *Homo sapiens* (human-Hs), *Strongylocentrotus purpuratus* (sea urchin-Sp), *Ciona intestinalis* (ascidian-Ci), *Nematostella vectensis* (sea anemone-Nv), *Monosiga brevicollis* (choanoflagellate-Mb), *Magnaporthe grisea* (fungus-Mg), *Fusarium graminearum* (fungus-Fg), *Coprinopsis cinerea* (fungus-Cc), *Laccaria bicolor* (fungus-Lb), *Postia placenta* (fungus-Pp), *Puccinia graminis* (fungus-Pg), *Phycomyces blakesleeanus* (fungus-Pb), *Batrachochytrium dendrobatidis* (fungus-Bd), *Dictyostelium discoideum* (slime mold amoeba-Dd), *Arabidopsis thaliana* (plant-At), *Oryza sativa* (plant-Os), *Physcomitrella patens* (moss-Pp), *Cyanidioschyzon merolae* (red alga-Cm), *Phytophthora sojae* (oomycete-Ps), *Phaeodactylum tricornutum* (diatom-Pt), *Naegleria gruberi* (amoeboflagellate-Ng). Two Fre genes (*Aspergillus nidulans*-An and *Saccharomyces cerevisiae*-Sc) are used as references. The An-Fre1 protein (GenBank No. AAN61438) is defined as an out-group. Evolutionary distances (inferior bar) are equivalent to 0.1 amino acid substitution per site.


fungus-An-Fre1
fungus-Sc-Fre1
diatom-Pt-NoxD
alga-Cm-NoxD1
alga-Cm-NoxD2
NoxD
fungus-Mg-NoxC
fungus-Fg-NoxC
NoxC (fungi)
waterflea-Dp-Duox
nematode-Cb-Duox
snail-Lg-Duox3
human-Hs-Duox1
human-Hs-Duox2
snail-Lg-Duox1
snail-Lg-Duox2
Duox
Ps-rboh-B
Ps-rboh-C
Ps-rboh-A
rboh (oomycetes)
moss-Pp-rboh-A
moss-Pp-rboh-C
moss-Pp-rboh-B
moss-Pp-rboh-D
rboh (moss)
plant-Os-rboh-E
plant-Os-rboh-F
plant-Os-rboh-D
plant-Os-rboh-H
plant-Os-rboh-A
plant-Os-rboh-B
plant-At-rboh-D
plant-Os-rboh-C
plant-Os-rboh-G
rboh (higher plants)
slime mold amoeba-Dd-NoxC
NoxC (amoeba)
snail-Lg-Nox5A
snail-Lg-Nox5B
human-Hs-Nox5
waterflea-Dp-Nox5A
waterflea-Dp-Nox5B
Nox5
amoeboflagellate-Ng-NoxA
NoxA (amoeboflagellate)
slime mold amoeba-NoxA
slime mold amoeba-NoxB
NoxA/B (amoeba)
snail-Lg-Nox4
human-Hs-Nox4
sea aemone-Nv-Nox4
Nox4
fungus-Pg-NoxA
fungus-Bd-NoxA
fungus-Mg-NoxA
fungus-Fg-NoxA
fungus-Pp-NoxA
fungus-Cc-NoxA
fungus-Lb-NoxA
fungus-Bd-NoxB
fungus-Mg-NoxB
fungus-Fg-NoxB
fungus-Pg-NoxB
fungus-Pp-NoxB
fungus-Cc-NoxB
fungus-Lb-NoxB
NoxA/B (fungi)
choanoflagellate-Mb-Nox2
sea urchin-Sp-Nox2A
sea urchin-Sp-Nox2B
ascidion-Ci-Nox2
sea anemone-Nv-Nox2A
sea anemone-Nv-Nox2B
snail-Lg-Nox2
ancestral Nox2
(co-ortholog Nox1-3)
human-Hs-Nox1
human-Hs-Nox2
human-Hs-Nox3
Nox1-3 (vertebrates)
0.1

Alignment of Nox domain

```
Dp-Nox5A        ------------SRWSASVFWSYLRNNAAFLAFLVAFLLVNIALFASRAYQYRQET---- 44
Dp-Nox5B        ------------SQSVFQSFSSSYAKNNVPFIIFVLAYAIVNLGLIVSRGIQYKEEN---- 44
Hs-Nox5         ----------------------WHNHRSQLFCLATYAGLHVLLFGLAASAHRDLG---- 33
Lg-Nox5A        -------------RACRYFTLKYWRNNRKEGVLFLLYFFINICLFALNCFLYRKSN---- 43
Lg-Nox5B        -------------ELPRYLQSNYIRNNLKKIIFFIIYFMTNIGLYAYGAYSYRESN---- 43
Dd-NoxC         ----------------FHSLKRYLKIEGSKLFFISLFFIINSILVITSFLNVHANNKRAI 44
Mg-NoxA         ---------------MSVGEFLAKQLTAQKLFFNISFWGFHIGIFAYGWYKQFSDPRLAG 45
Fg-NoxA         -----------MGSQLGFVELIKKQFVPGKLLYHFLFWTFHWGIFAYGWWKQAVDPRLAG 49
Cc-NoxA         ---------------MAETWFQREFLQARRLTFNVLFYGLHLAIFAYGWYSQATNQRLAG 45
Lb-NoxA         ---------------MGESWFRREFMVPRRLAFNVLFYGAHLSLFIYGWYSQATNQRLAG 45
fPp-NoxA        ---------------MGESWFRREFLAPRRLIFNVLFFGLQVSFFSYGWWAQATNNKLAA 45
Pg-NoxA         ------------MTDCEKCYTCAIQDNKLKELHRGLEGAPESEVEQCHWPNKASGLVSHR 48
Bd-NoxA         ----------------------MVEITARLVAFHVLFWGFHIALFVYGFFKQKNDPELQV 38
Mg-NoxB         ----------------------WMVNEGYRRFFVFVFMILHAMVFAFGFVNYAVKDNLQR 38
Fg-NoxB         ----------------------WMINEGYRRFFVFVFMILHALIFSFACVHYAQKESLET 38
Cc-NoxB         ----------------KQRWDVWMINEGGRQLFFGTWIFLHLLVAVFGFMHYQLKDNSEG 44
Lb-NoxB         ------MKKPVEPKTLREKFSIWMINEGGRQLFFGTWIFLHLLVAVFGFMNYQLKDNLVD 54
fPp-NoxB        ----------------IDRWRLWMINEGGKRLFFTFFILLHVLVIVFGFLYYDTSDDLKG 44
Pg-NoxB         ----------------TTRFKSWMVNEGSRKFFVWTWIFIHIITFVFAFLNFLLKDNLTQ 44
Bd-NoxB         ----------------MVTFNNWMVNEGRSRLFFALFIASQLGYFAWSYYQLWTSPTLVT 44
Hs-Nox2         -------------------MGNWAVNEGLSIFVILVWLGLNVFLFVWYYRVYDIPPKFFY 41
Hs-Nox3         ------------------MMGCWILNEGLSTILVLSWLGINFYLFIDTFYWYEEEESFHY 42
Hs-Nox1         -------------------MGNWVVNHWFSVLFLVVWLGLNVFLFVDAFLKYEKADKYYY 41
Lg-Nox2         -------------------MGEWIVNELPKWIVVTVWLLINTGIFIGTFFSYKNDIEYFY 41
Nv-Nox2A        --------------------MANLGNDVARYIVLIIWMGINIYLFIDVYYKLATTKENMY 40
Nv-Nox2B        --------------------------MNFYFSQIIWAVINIILFATTYHNYGVTKKYTY 33
Ci-Nox2         ---------------MNARLNGFLVNEFPKYIVFLLWLGLNGFLFGYYYNFYNTKKTFFY 45
Sp-Nox2A        -------------------MGDKFLNEGLKYFFLLLWLAANVAYWVVTFLVYEQGPQYFY 41
Sp-Nox2B        ---------------------------------AAWAIVNLIIWLVTFFKYMDNANYIY 26
Mb-Nox2         ---------MQFWWQQGLTFRQWFVNDGPMYTFVLLWMCANVGLFFYTFSFYTQD-KYNY 50
Hs-Nox4         ---------------MAVSWRSWLANEGVKHLCLFIWLSMNVLLFWKTFLLYNQGPEYHY 45
Nv-Nox4         -------------------------------YFFFQVLWTGPFIVIFWQTYNKYSNCPEYFY 31
Lg-Nox4         -------------MAYQVSVASWIRRHGQKYFLLIVWICGCLFLFYRTFYYFKDDPSFFY 47
Dd-NoxA         -----------MRLPTKEEIQRYWVNEGNKLILVILYTLGNIAAFVYTFVHYYNSPAFEV 49
Dd-NoxB         ----------------------WHR-GISTYIMLFYIALNIGVGVHMFYNMYHSDIFKF 36
Ng-NoxA         -------------FTNRHEFMNYWSAEGQKLVVVLIWVILNLFLFTEAFVRYYYALLLVN 47
Os-rboh-C       ------------VRHYWQQFMYFLEENWKRSWVMTLWISICIALFIWKFIQYRNRAVFGI 48
Os-rboh-G       ------------LRRGLRRLSYFMEDNWKRVWVMALWLAINAGLFTWKFMAYKRHPTFDV 48
At-rboh-D       ---------------WSEKIKYFILDNWQRLWIMMLWLGICGGLFTYKFIQYKNKAAYGV 45
Os-rboh-A       ------------IRKISTSLSYYFEDNWKRLWVLALWIGIMAGLFTWKFMQYRNRYVFDV 48
Os-rboh-B       ------------IRKISTKLSYYLEDNWKRLWVLALWIGIMAGLFIWKFIQYRHRYVFNV 48
Os-rboh-D       ------------VRKAAARVRVAAEENWRRAWVVALWFAAMASLFVWKFVQYRRTPAFRV 48
Os-rboh-H       ------------PRRAAARAQVAAEENWRRAWVLALWFAAMAGLFAWKFVQYRRTPAFRV 48
Os-rboh-E       ------------LKRHVSRTVDFVHENWKRIWLVALWLAVNVGLFAYKFEQYERRAAFQV 48
Os-rboh-F       ------------MQRRFNKTVDFIHENWKRIWVLSLWAILNIALFMYKFVQYSRRDAFQV 48
mPp-rboh-A      ------------IIKLAEKCVHFFLDNWKRIWILALWMSVMAALFAWKFLQYRDRSSWWI 48
mPp-rboh-C      ------------MMGVAEKSAYFLLDNCKRIWILALWISVMVGLFAWKFLQYRNRSAWWV 48
mPp-rboh-B      -----------RIRSFAEKTRNCFQDNWKRLWILALWMMAMTGLFIWKFFQYREHAAFPI 49
mPp-rboh-D      ------------VQDATGKAKHFLHDYWKRLWILALWVMAMTGLFTWKFLQYRHHEAYAV 48
Ps-rboh-B       ------------PIRPKSKFGAWYSANKLRIWWLLFYAILNNIAFWVKWFSYDVDP---A 45
Ps-rboh-C       ----------------------DNKLRIWWLLFYFIVNNIAFWVKWFMYEVDP---A 32
Ps-rboh-A       ---------------RWYRINKFCRRYKAEIFWLTLYFLLMVAVFIAKASRFAFDP---A 42
Hs-Duox1        ----------------------FIENYRRHIGCVAVFYAIAGGLFLERAYYYAFAAHHTG 38
Hs-Duox2        ----------------------FVENYRRHIVCVAIFSAICVGVFADRAYYYGFASPPSD 38
Lg-Duox1        ------------FQTKIYEITRYIENYRLHIFWFILFNLVTLGIFIERAYYYSIEREHAG 48
Lg-Duox2        -------------QEKIYAITKYIEIYRLHIFWVLLYTLVTCGIFIERAYYYAEGREHAG 47
Lg-Duox3        -----------PFKAKVKVIKHFIENYRQHIFFLVLVFGIVLGLFAERFYYYTVEREHSG 49
Dp-Duox         ------------ILRKWDELTTFLEANRQNIFYLFVFYVVTIALFVDRFIHYSFMSEHTD 48
Cb-Duox         ------------PMTLVHQVCAFLETYRQHVFIVFCFVAINLVLFFERFWHYRYMTENRD 48
Mg-NoxC         ----------------FRRVRAYWAVHGPEIAFLGIVVGLQLGLGIWQCHKYASGEQYQA 44
Fg-NoxC         ----------------WRRIRSYWAVHGPEIVFLGVVISMQLAFGIWQLVKYQTTPGYRA 44
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Cm-NoxD2        ----------------LDLWNERVGESGLFFSLLVAYWCSQAWFFVYGVKYALSLALPSD 44
Cm-NoxD1        -----------------QIWNIHLVENGLWYSIVLLFFCAMSWFFAYGVRYVIVDLRPSG 43
Pt-NoxD         ----------------WAKSEAFFFNQGANLAFLGLMLALNILMLVWGTYEFTGTRFVTD 44
An-Fre1         MLLRISFLAIFVPAMAKQKSFDDAVSSLDADCLCPIYTALSQYTFSGTPAGGSYNHSISV 60
Sc-Fre1         ---------MVRTRVLFCLFISFFATVQSSATLISTSCISQAALYQFGCSSKSKSCYCKN 51


Dp-Nox5A        --------PAYVIAR-ACGQVLNFNCAFVVVL-MLHHCITWIRQTKLAV----------- 83
Dp-Nox5B        --------VFYILAR-CGGQALNFNCAFILVL-MLRHCITLLRQIGCGY----------- 83
Hs-Nox5         --------ASVMVAK-GCGQCLNFDCSFIAVL-MLRRCLTWLRATWLAQ----------- 72
Lg-Nox5A        --------VYIIIAR-GCGMCLNFNCAFILMT-MLRKTITYIRTFKNLH----------- 82
Lg-Nox5B        --------NAIIIAR-GSGMCLNFNCMFVLVL-MLRKCITWLRTWQYVYC---------- 83
Dd-NoxC         EL----FGPGVYITR-IAAQLIEFNAAIILMT-MCKQLFTMIRNTKFKF----------- 87
Mg-NoxA         LN--TLTFSVWISRG--AGLVLSVDGMLILLP-VCRTIMRWIRP----------------- 84
Fg-NoxA         LN--TLKFSVWISRG--AGLVLSVDCMLILLP-VCRTVMRWVRP----------------- 88
Cc-NoxA         LN--TLQWSVWVSRG--AGLVLALDGGLILIP-MLRNIIRVVRP----------------- 84
Lb-NoxA         LN--SLKYSVWTSRG--AGLVLAFDGGLILLP-MLRNIIRIIRP----------------- 84
fPp-NoxA        LN--ALQWSVWVSRG--AGLVLAFLAACLLLP-MLRNCIRVIRP----------------- 84
Pg-NoxA         SN--GIGVPGSHEDGSLKGFHVCMGRRLMPLSRWVRTFYTSLQK---------------- 90
Bd-NoxA         LN--SIGPSVTISRG--AGLVLGVDCAALLIP-VCRNIVRFFRSS---------------- 78
Mg-NoxB         AR--DTFGPTFMIAR-AAALVLHFDVALILFP-VCRTFISLARQTPLN------------ 82
Fg-NoxB         SR--QTFGFTFIIAR-SAALVLHVDVAIILFP-VCRTLISLLRQTPLN------------ 82
Cc-NoxB         AR--SVFGITFPIAR-TAALVLHVDVIFILLP-VCRNFISLLRRTPLN------------ 88
Lb-NoxB         AR--ALFGVTFTIAR-TAALILHIDVIFILLP-VCRNFVSLLRRTPLN------------ 98
fPp-NoxB        AR--KTFGITYPIAR-SAALVLHVEVAFILLP-ICRNFISLLRRTPLN------------ 88
Pg-NoxB         AR--ATFNITYPIAR-ASALVLHVDVAFILLP-ICRNFITLLRRSALN------------ 88
Bd-NoxB         FR--TVLQHGLPMAR-AAANVINLDCGIILF------------------------------ 72
Hs-Nox2         TR--KLLGSALALAR-APAACLNFNCMLILLP-VCRNLLSFLRGSSAC------------ 85
Hs-Nox3         TR--VILGSTLAWAR-ASALCLNFNCMLILIP-VSRNLISFIRGTSIC------------ 86
Hs-Nox1         TR--KILGSTLACAR-ASALCLNFNSTLILLP-VCRNLLSFLRGTCSF------------ 85
Lg-Nox2         LR--LIVGDALCFAR-ASAACLNFNCFLILLP-VCRNFISFLRGTCAR------------ 85
Nv-Nox2A        LN--KLVKFGLALAR-APAMVLNFNCMLILLT-MCRNLLSFIRGSCK------------ 83
Nv-Nox2B        LR--EVIKNGLPIAR-GAAMVLNFNCMLILLS-MCRNLNSLIRRHCKST---------- 78
Ci-Nox2         TR--VLLGPALALAR-APAACLNLNCLLVLLP-VCRNLLSLFRKACMC------------ 89
Sp-Nox2A        IR--RITGVGLSIAK-AAGAALNLNSMIILLP-ICRNLISFFRGSCATNTL---------- 88
Sp-Nox2B        TK--YLMKNGLPVAR-ASAACLNFNSMLILFP-VCRNMISYLRGSCESTKF---------- 73
Mb-Nox2         LR--RIVHFGLPVAR-GAASVLNLNCALVLLP-VCRNLVNFCRGIFES------------ 94
Hs-Nox4         LH--QMLGLGLCLSR-ASASVLNLNCSLILLP-MCRTLLAYLRGS-QKVPS---------- 91
Nv-Nox4         LH--NMLGNSLSWSR-GAAAVLWFSCSLMLLP-MCRNLLAFVRNT-LCKSS---------- 77
Lg-Nox4         VR--QILGVSMCISR-GTASILNLNCGLILLP-TCRCILTFITYLNSKVRI---------- 94
Dd-NoxA         VG------YGVCFAR-GCAQLLKLNCALILVP-VLRNLLSFLRGTFLN------------ 89
Dd-NoxB         LG------LSFCFSR-TAARLINLNSAVILLP-VLRNFLSWLRGTIVN------------ 76
Ng-NoxA         ITGVTVVPFYVALAR-GFGQLLNFNCALLILP-TMRTLLNVFRSLKFG------------ 93
Os-rboh-C       MG------YCVTTAK-GAAETLKFNMALVLLP-VCRNTITWIRSKTQVGA---------- 90
Os-rboh-G       MG------YCVCVAK-GGAETTKFNMALILLP-VCRNTITWLRSRTKLGA---------- 90
At-rboh-D       MG------YCVCVAK-GGAETLKFNMALILLP-VCRNTITWLRNKTKLGT---------- 87
Os-rboh-A       MG------YCVTTAK-GAAETLKLNMAIILLP-VCRNTITWLRS-TRAAR---------- 89
Os-rboh-B       MG------YCVTTAK-GAAETLKLNMAIILLP-VCRNTITWLRN-TRAAR---------- 89
Os-rboh-D       MG------YCLPTAK-GAAETLKLNMALVLLP-VCRNTLTWLRS-SWARF---------- 89
Os-rboh-H       MG------YCLPTAK-GAAETLKLNMALVLLP-VCRNTLTWLRS-SWARF---------- 89
Os-rboh-E       MG------HCVCVAK-GAAEVLKLNMALILLP-VCRNTLTTLRS-TALSH---------- 89
Os-rboh-F       MG------YCVCIAK-GAAETLKLNMAVILLP-VCRNTLTRLRS-TALSK---------- 89
mPp-rboh-A      MG------DCLCVAK-GAAETLKLNMALILLP-VCRNTLTRLRS-TRLWK---------- 89
mPp-rboh-C      MG------DCLCVAK-GAAETLKLNMALILLP-VCRNTITRLRS-TRLRR---------- 89
mPp-rboh-B      MG------NCLCVAK-GAAETLKLNMALVLLP-VCRNTLTRLRS-TRLGK---------- 90
mPp-rboh-D      MG------ECLCVAK-GAAETLKLNMALILLP-VCRNMLTRLRS-TRLGK---------- 89
Ps-rboh-B       IG------WGLRIAR-ANAQVAMVNCVFVLLP-MCRSITQVMKRSRILWR---------- 87
Ps-rboh-C       IG------WGLRIAR-ANAQVAMLNCVFVLLP-MCRSITQVMKRSKFLWR---------- 74
Ps-rboh-A       VG------NCPRVAK-GFAEICLVNTMFVLLP-MCRNFVTGLRTLPVVVN---------- 84
Hs-Duox1        ITD-TTR-VGIILSR-GTAASISFMFSYILLT-MCRNLITFLRETFLNR------------ 83
Hs-Duox2        IAQ-TTL-VGIILSR-GTAASVSFMFSYILLT-MCRNLITFLRETFLNR------------ 83
Lg-Duox1        LRR-LAG-YGVSVTR-GAASVQMFLYVSLLVT-MSRNTLTFFRETFLHR------------ 93
Lg-Duox2        LRR-LSGAWTTAMIR-GSASVIMFTYVSLLVT-MCRNTITLLRETVLHR------------ 93
Lg-Duox3        LMR-LMS-YGISITR-GAAAAMSFTFSLLLLT-MCRNTITYLRSTFLNM------------ 94
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Dp-Duox          LRH-IMG-VGIAITR-GSAAALSFCYSLLLLT-MSRNLLTKLKEFSVQQ---------- 93
Cb-Duox          LRR-VMG-AGIAITR-GAAGALSFCMALILLT-VCRNIITLLRETVISQ---------- 93
Mg-NoxC          AFG-----WGVALAK-LCAGALYPTFFFLILS-MSRYFSTFLRRSYHLSR---------- 87
Fg-NoxC          AFG-----WGVVMAK-TCAGALYPTFFFLILS-MSRYFSTWLRRSYHISR---------- 87
Cm-NoxD2         WSR-----YMLIFGR-GFGYVATFNALLLPIT-VNRTLTNILYRLPLYD---------- 86
Cm-NoxD1         ILR-----YAGSIAR-GMGFACTFCSLVLPLT-INRTLATVLYRTPLYD---------- 85
Pt-NoxD          SD---ILRVTLPIAR-AGGRVVTWNAALIFLS-GSKYLWTWLRQSPLHLG---------- 89
An-Fre1          TAFFAEESYIQTLTNFDSICNSTVEIASMYASARARCDGNSPAASVSFWQE--------- 111
Sc-Fre1          IN---WLGSVTACAYENSKSNKTLDSALMKLASQCSSIKVYTLEDMKNIYLNASNYLRAP 108


Dp-Nox5A         ----------FLPLDQH-VYLHKLCG------------------------------------ 98
Dp-Nox5B         ----------FLPLDLH-VYLHKVCG------------------------------------ 98
Hs-Nox5          ----------VLPLDQN-IQFHQLMG------------------------------------ 87
Lg-Nox5A         ----------FLPLDQH-IEMHKLTG------------------------------------ 97
Lg-Nox5B         ----------ILPLDQH-ILFHKTTG------------------------------------ 98
Dd-NoxC          ----------LFPVDKY-MTFHKLIG------------------------------------ 102
Mg-NoxA          -----KIRFI-PLDEN-IWFHRQIA------------------------------------ 102
Fg-NoxA          -----KIRFL-PLDEN-LWMHRQLA------------------------------------ 106
Cc-NoxA          -----KLTWLFPADEN-IWFHRQVA------------------------------------ 103
Lb-NoxA          -----KLTWAFPADEN-IWFHRQVA------------------------------------ 103
fPp-NoxA         -----KVAFLFPADEN-IWFHRQAA------------------------------------ 103
Pg-NoxA          -----PYAPFKTEDRM-ARLSRQVA------------------------------------ 109
Bd-NoxA          -----FLNKYIPIDSN-LYFHKWLA------------------------------------ 97
Mg-NoxB          ---------GIIQFDKN-ITFHITTA------------------------------------ 98
Fg-NoxB          ---------GILQFDKN-ITFHIVTA------------------------------------ 98
Cc-NoxB          ---------DIIPFDKN-ITFHKATA------------------------------------ 104
Lb-NoxB          ---------DIIPFDKN-ITLHKATA------------------------------------ 114
fPp-NoxB         ---------SYIPFDKN-ITFHKAVA------------------------------------ 104
Pg-NoxB          ---------QVIPFEKN-ITFHKFTG------------------------------------ 104
Bd-NoxB          ------------TFDKN-ITFHIWIA------------------------------------ 85
Hs-Nox2          ----CSTRVRRQLDRN-LTFHKMVA------------------------------------ 105
Hs-Nox3          ----CRGPWRRQLDKN-LRFHKLVA------------------------------------ 106
Hs-Nox1          ----CSRTLRKQLDHN-LTFHKLVA------------------------------------ 105
Lg-Nox2          ----CHR-ARRQLHRQ-ITYHKYIA------------------------------------ 104
Nv-Nox2A         ----CCSFMLRLLDKHHVTFHKYIA------------------------------------ 104
Nv-Nox2B         ----CMAPVIRVLDKS-ITFHKYIA------------------------------------ 98
Ci-Nox2          ----CPRRIRRVLDKN-IKFHRMCA------------------------------------ 109
Sp-Nox2A         ----CRRSVRRQLDKN-LTFHKTVA------------------------------------ 108
Sp-Nox2B         ----SRRNLRRQLDKN-ITFHKLIA------------------------------------ 93
Mb-Nox2          -----KRSIRRLFDKN-ILFHKWCA------------------------------------ 113
Hs-Nox4          ------RRTRRLLDKS-RTFHITCG------------------------------------ 109
Nv-Nox4          ------RRLRRLLDKH-IWFHKACA------------------------------------ 95
Lg-Nox4          ------STIRVILESC-KGFHKVCA------------------------------------ 112
Dd-NoxA          ---------NYVPFDKN-IVFHKLIA------------------------------------ 105
Dd-NoxB          ---------NYIPIDKH-LNFHKLCA------------------------------------ 92
Ng-NoxA          ---------SIFPLDKN-LVFHRYLA------------------------------------ 109
Os-rboh-C        ----------VVPFNDN-INFHKV-------------------------------------- 103
Os-rboh-G        ----------VIPFNDN-INFHKV-------------------------------------- 103
At-rboh-D        ----------VVPFDDS-LNFHKV-------------------------------------- 100
Os-rboh-A        ----------ALPFDDN-INFHKT-------------------------------------- 102
Os-rboh-B        ----------ALPFDDN-INFHKT-------------------------------------- 102
Os-rboh-D        ----------FVPFDDN-ITFHKM-------------------------------------- 102
Os-rboh-H        ----------FVPFDDS-ITFHKVESSSGFKWAPPGRSNQCSVAGEPAGTEDPRPGRLRVK 139
Os-rboh-E        ----------VIPFDDN-INFHKV-------------------------------------- 102
Os-rboh-F        ----------VVPFDDN-INFHKV-------------------------------------- 102
mPp-rboh-A       ----------IIPFDDN-LDFHKAS------------------------------------- 103
mPp-rboh-C       ----------IIPFDDN-LDFHK--------------------------------------- 101
mPp-rboh-B       ----------IIPFDDN-LDFHKET------------------------------------- 104
mPp-rboh-D       ----------LIPFDEN-LDFHKASL------------------------------------ 104
Ps-rboh-B        ----------YIPFDDS-IAFHKIAG------------------------------------ 102
Ps-rboh-C        ----------IIPFDDH-IAFHKISG------------------------------------ 89
Ps-rboh-A        ----------HLPIDHH-IEFHKICG------------------------------------ 99
Hs-Duox1         ----------YVPFDAA-VDFHRLIA------------------------------------ 98
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Hs-Duox2        ---------YVPFDAA-VDFHRWIA----------------------------------- 98
Lg-Duox1        ---------FIPFDAF-HAMHKYTA----------------------------------- 108
Lg-Duox2        ---------FIPFDSA-VAFHKYIA----------------------------------- 108
Lg-Duox3        ---------FIPFDSH-ISFHKVIA----------------------------------- 109
Dp-Duox         ---------YIPLDSH-IQFHKICA----------------------------------- 108
Cb-Duox         ---------YIPFDSA-IAFHKIVA----------------------------------- 108
Mg-NoxC         ---------FINWDLS-QEFHIKIS----------------------------------- 102
Fg-NoxC         ---------FFNWDLS-QEFHIRIS----------------------------------- 102
Cm-NoxD2        ---------IFSVARWLPDLHAIIA----------------------------------- 102
Cm-NoxD1        ---------LLCVERWIPDMHTIVG----------------------------------- 101
Pt-NoxD         ----------FPIDNVMPYYHKMIA----------------------------------- 104
An-Fre1         ----VCDVDISSLETNRSTTYTSMSIVDPDVNTTASTG----TIKNPVLLSESYYRRAYK 163
Sc-Fre1         EKSDKKTVVSQPLMANETAYHYYYEENYG------------------------------- 137


Dp-Nox5A        ----------------------FTIIFFGTLHTAMHMINF----SNELVSPVT------- 125
Dp-Nox5B        ----------------------GVVVVLSAVHTLMHLINFPLNIADKVESPVT------- 129
Hs-Nox5         ----------------------YVVVGLSLVHTVAHTVNF-------VLQAQAE------- 112
Lg-Nox5A        ----------------------IMIAVFTVIHTLAHIGNA--------VVVAE------- 120
Lg-Nox5B        ----------------------IMIAVHSLIHTMGHIGNA--------VIVSE------- 121
Dd-NoxC         ----------------------YTLIIASFLHTIGWIVGMA-----VATGKPD------- 128
Mg-NoxA         ----------------------YAMLIFSITHTAAHYVNFFNVERLQIRA---------- 130
Fg-NoxA         ----------------------YSMLLFTCLHTGAHYVNFYNVEITQIRP---------- 134
Cc-NoxA         ----------------------YSMAFWSVVHTTAHYVNFINVERTQIRK---------- 131
Lb-NoxA         ----------------------YSLAFWAMVHTTAHYVNFINVERTQIRK---------- 131
fPp-NoxA        ----------------------YCLAFWSMVHTTAHYVNFINVERTQVRQ---------- 131
Pg-NoxA         ----------------------YTTLFFTAIHTTAHYVNMFHVETTQIRP---------- 137
Bd-NoxA         ----------------------YSMLFFSLLHTNAHYTNFFFVETKLPSLG--------- 126
Mg-NoxB         ----------------------WSIVFFSWVHTVAHWNNFAQIAAQ------------- 122
Fg-NoxB         ----------------------WSIVFWSWVHTIAHWNNFAQVAIK------------- 122
Cc-NoxB         ----------------------WSIVIGSAVHTLAHMVNFTKLALS-IPN---------- 131
Lb-NoxB         ----------------------WSIVAGTVVHVVAHMVNFYKLAMADTDA---------- 142
fPp-NoxB        ----------------------WGICLFTFIHIAAHMVNFARLAFADPLA---------- 132
Pg-NoxB         ----------------------FALAFFSAIHILAHMVNFGQLAVR------------- 128
Bd-NoxB         ----------------------YSIAFWTFVHVIAHYFNYNNVRIA------------- 109
Hs-Nox2         ----------------------WMIALHSAIHTIAHLFNVEWCVNARVN---------- 132
Hs-Nox3         ----------------------YGIAVNATIHIVAHFFNLERYHWSQSE---------- 133
Hs-Nox1         ----------------------YMICLHTAIHIIAHLFNFDCYSRSRQA---------- 132
Lg-Nox2         ----------------------YMICLQTAIHIAAHCFDFEFLIEAYDS---------- 131
Nv-Nox2A        ----------------------YMICLQTAIHCIAHIFNVEFLILAWQ----------- 130
Nv-Nox2B        ----------------------YTICFFTIVHVGAHCYNFENLIDSWS----------- 124
Ci-Nox2         ----------------------YMIVLMTLIHYFAHCFNVDFFTSAYQSKILATDTPAI 146
Sp-Nox2A        ----------------------YMIVVWTIVHVVAHAFNFRNLYNHYRCVTT-------- 138
Sp-Nox2B        ----------------------YAIGFFVILHVGAHCFNLQNLYNG-RKATS-------- 122
Mb-Nox2         ----------------------YVICVFASIHICAHFFNVNNLVEDGTYG---------- 141
Hs-Nox4         ----------------------VTICIFSGVHVAAHLVNALNFSVNYSED---------- 137
Nv-Nox4         ----------------------ITTIIAAVVHTVAHLINGKRFSENYSTD---------- 123
Lg-Nox4         ----------------------ITIILSSVIHVIGHIFNALKYSLYYNYQ---------- 140
Dd-NoxA         ----------------------WVICFATFGHVMAHFNNFR-LYQDITPQ---------- 132
Dd-NoxB         ----------------------FMLFCCTIIHCVGHYISFKKINDDVLKI---------- 120
Ng-NoxA         ----------------------YWIVVCVIGHTLGHYLNYACCWQLYN------------ 135
Os-rboh-C       ---------------------IAAGVAVGVALHAGAHLTCDFPRLLHAS------------ 131
Os-rboh-G       ---------------------VAGGVVVGVALHGVTHLTCDFPRLLHAS------------ 131
At-rboh-D       ---------------------IASGIVVGVLLHAGAHLTCDFPRLIAAD------------ 128
Os-rboh-A       ---------------------IAAAIVVGIILHAGNHLVCDFPRLIKSS------------ 130
Os-rboh-B       ---------------------IAAAIVVGVILHGGLHLVCDFPRLIGSS------------ 130
Os-rboh-D       ---------------------IATAIVVGITLHAGNHLACDFPRLIASG------------ 130
Os-rboh-H       APVIQKSPRPTGLPLSCGATIIATAIALGICTHAGTHLACDFPRLIGSS------------ 188
Os-rboh-E       ---------------------IAATIAAATAVHTLAHVTCDFPRLINCP------------ 130
Os-rboh-F       ---------------------IALTIAIGAATHTLAHVTCDFPRLVSCP------------ 130
mPp-rboh-A      -------------------QIVAGGMAAGVFLHVGCHATCDLPRFVNAD------------ 133
mPp-rboh-C      --------------------IVAGGIAAGVILHATCHITCDIPRFVEAD------------ 130
mPp-rboh-B      ----------------------GGIAAGVFIHGVCHITCDIPKFVESG------------ 130
mPp-rboh-D      --------------LPDPEHCIAAAIAVGVFVHGTLHITCDIPKFVNCD------------ 139
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Ps-rboh-B       ----------------------SVLLTAGLIHTIAHVFNEIYLYLVATPEEIK------ 133
Ps-rboh-C       ----------------------SVLLIAGLIHTIAHVFNEIYLYLIATPDEVK------ 120
Ps-rboh-A       ----------------------VVLLLAFLGHTAAWLV--IVVYVRTVPLAVW------ 128
Hs-Duox1        ----------------------STAIPVAVLHSVGHVVNVYLFSISPLSV--------- 126
Hs-Duox2        ----------------------MAAVVLAILHSAGHAVNVYIFSVSPLSL--------- 126
Lg-Duox1        ----------------------LLALIFTAMHIIGHGINLFHISTQASSD--------- 136
Lg-Duox2        ----------------------VLAMIGTIVHIFGHAVNLYCVVTQPPQD--------- 136
Lg-Duox3        ----------------------WTALFFSGLHVIGYSFNFYHLATQPTKF--------- 137
Dp-Duox         ----------------------LTAFFFSMLHTVGHVVNFYHVSTQPIEH--------- 136
Cb-Duox         ----------------------LFAAFWATLHTVGHCVNFYHVGTQSQEG--------- 136
Mg-NoxC         ----------------------IVALVLASLHALGHLSGTFNWGSRPERQ--------- 130
Fg-NoxC         ----------------------CVAILLATLHAIGHLTGSFVHGSDPANE--------- 130
Cm-NoxD2        ----------------------RWFTIAGWIHGILLSVAYGVGTLPFRGG--------- 130
Cm-NoxD1        ----------------------TSLAATGWIHGIAQIVNYAASVFVFRGG--------- 129
Pt-NoxD         ----------------------WTIIFMGCVVHTIPQVINYATKELRIEGG--------- 133
An-Fre1         TCVIHDKALGQDIRFGWGLMGYWVAILVFGMAQKILSLWSARRALDSGRDAEAN------ 217
Sc-Fre1         ----------IHLNLMRSQWCAWGLVFFWVAVLTAATILNILKRVFGKNIMANS------ 181


Dp-Nox5A        ------------------------------NQTHSTEEWLFTTIPGLFGLIPGVAN-LTG 154
Dp-Nox5B        ------------------------------KETHSAIEWLFTTEPGLFGLVPGLAN-LTG 158
Hs-Nox5         ------------------------------ASPFQFWELLLTTRPG-IGWVHGSAS-PTG 140
Lg-Nox5A        ------------------------------DFGVTVWEFIFTTKAN-IGWVLGFAP-LSG 148
Lg-Nox5B        ------------------------------TNNITAVEVIFTTKAN-LGWLLGSAP-ITG 149
Dd-NoxC         ------------------------------NIFYDCLAPHFKFRPTVWEMIFNSLPGVTG 158
Mg-NoxA         ----------------------------------QTAVQIH-----------YAQPGGATG 146
Fg-NoxA         ----------------------------------VTALQIH-----------YAQPGGITG 150
Cc-NoxA         ----------------------------------QTAQMIH-----------YTQPGGITG 147
Lb-NoxA         ----------------------------------QTALQIH-----------YTQPGGITG 147
fPp-NoxA        ----------------------------------EYALQIH-----------YTQAGGITG 147
Pg-NoxA         ----------------------------------EKAIEIM-----------YSETGPLTG 153
Bd-NoxA         ----------------------------------LKAWMIH-----------YLAWSGATG 142
Mg-NoxB         --------------------------QKLG--IYGWLLAN-----------FVSGPGWTG 143
Fg-NoxB         --------------------------YNLG--IYGWLLAN-----------FVSGPGWTG 143
Cc-NoxB         -------------------------MTTGQRIGAFMAAN-----------FATGPGLTG 154
Lb-NoxB         -------------------------KTTGQRVLAFLEAN-----------FNTGPGVTG 165
fPp-NoxB        -------------------------KTPGERFVVWLIAN-----------FTTGPGVTG 155
Pg-NoxB         --------------------------TQTG--IVGFIGAN-----------FLTGPGATG 149
Bd-NoxB         -------------------------------LG---VSAEYLS-----------LVSGPGLTG 127
Hs-Nox2         -NSDPYSVALSELGDRQNE----SYLNFARKRIKNPEGGLYLA--------VTLLAGITG 179
Hs-Nox3         -EAQGLLAALSKLGNTPNE----SYLNPVRTFPTNTTTEL-----------LRTIAGVTG 177
Hs-Nox1         -TDGSLASILSSLSHDEKKGG--SWLNPIQSRNTTVEYVT-----------FTSIAGLTG 178
Lg-Nox2         -PTKS-IQAITNLDTSNNG----TWLNPVRVQGTDATREV-----------FKTIAGVSG 174
Nv-Nox2A        -KGG-IYTKLCQLEDVGNE----TYINPIRDPNADPITVL-----------WTIVSGVTG 173
Nv-Nox2B        -KENEIDAKLSQLD--GAD----NWVNPIR--SEMSVGKR-----------GSKFAGVTG 164
Ci-Nox2         IQQKKLIAKLIQIGNNGNE----TYLNPIR-KSVFSVGAV-----------FLLTGGWTG 190
Sp-Nox2A        -DNDELCEGISAIGRKFKAKPEDNWLNPIQGAKTLPAGLGLIEQA------LIPIAGWSG 191
Sp-Nox2B        -EDDWLANRLSQP--SFDLNP----FKTIRSSD--VSGLGVIGPG------LSLLAGWTG 167
Mb-Nox2         --------------------------RILRDGTPMSQEEVL-----------FTTVAGGTG 165
Hs-Nox4         -------------------------FVELNAARYRDEDPRKLL------FTTVPGLTG 164
Nv-Nox4         -------------------------HPPLNFAKNRDQDPLEFV------MLSVAGFTG 150
Lg-Nox4         -------------------------YPEVNGASYPNQNPIFII------LWTVSGVTG 167
Dd-NoxA         -------------------------EYKRILGIDYPNLTPIKYA------FATLAGWTG 160
Dd-NoxB         -------------------------DDGKSVAGDYLNININNFPDEKYLFFKSVPGITG 154
Ng-NoxA         -------------------------SARTPLEACWWNK----------------YGTTG 153
Os-rboh-C       ------------------------------DAQYELMKP-FFGEKRPPNYWWFVKGTEGWTG 162
Os-rboh-G       ------------------------------DAAYEPMKK-YFGQTRIPDYWWFVRGVEGITG 162
At-rboh-D       ------------------------------EDTYEPMEK-YFGD-QPTSYWWFVKGVEGWTG 158
Os-rboh-A       -----------------------------DEKYAPLGQ-YFGEIKPT-YFTLVKGVEGITG 160
Os-rboh-B       -----------------------------EEKYAPLGK-YFGETKPT-YLTLVKGVEGITG 160
Os-rboh-D       -----------------------------PEEYRLVAD-AFGPEKPT-YVGLLSGVEGITG 160
Os-rboh-H       -----------------------------REEYELLLSGFFGASRPT-YRGLLAGVEGVTG 219
Os-rboh-E       -------------------------SDKFMATLGPNFGYRQPT-YADLLESAPGVTG 161
Os-rboh-F       -------------------------RDKFEATLGPYFNYVQPT-YSSLVASTPGWTG 161
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mPp-rboh-A      ----------------------------KETFFKHLGDHFDT-QPT-YSDILNMSVGYSG 163
mPp-rboh-C      ----------------------------KEKFFKYLGDDFDF-QPT-YSDILRMSVGYSG 160
mPp-rboh-B      ----------------------------DDKFFKYLGDEFEK-HPT-YANIAVMPVAITG 160
mPp-rboh-D      ----------------------------DEKFFEALGDQFDK-HPT-YADIAVTPVAITG 169
Ps-rboh-B       ----------------------------RSIFVTRHVSSFVNGERPPFITMLQSLPVWTG 165
Ps-rboh-C       ----------------------------RSIFVTRHVSTFVNGERPPFTTMLQALPVWTG 152
Ps-rboh-A       ----------------------------K--QSRYHHLAFVRDEN--LLLFALRVPIWTG 156
Hs-Duox1        ---------------------------LSCLFPGLFHDDGSELPQKYYWWFFQTVPGLTG 159
Hs-Duox2        ---------------------------LACIFPNVFVNDGSKLPQKFYWWFFQTVPGMTG 159
Lg-Duox1        ---------------------------LNCYFREYFR--ATDVLATFHYWAFTTITGITG 167
Lg-Duox2        ---------------------------VSCLFREYFR--GSHEIATFHYWAYQTITGLAG 167
Lg-Duox3        ---------------------------LCIFDSIVFR---ADKLPTFSFWLFGNMTGFTG 167
Dp-Duox         ---------------------------LRCLSKEISLP--SDYKPTITYWLFQTLTGLTG 167
Cb-Duox         ---------------------------LACLFQEAFFG--SNFLPSISYWFYGTITGLTG 167
Mg-NoxC         -------------------------------DAVGVLLGEDQVPRPYSAYVSSLPGITG 158
Fg-NoxC         -------------------------------DAVAEALGPDKVPRPYIDYVRSLPGFTG 158
Cm-NoxD2        ------------------------------FLPFSNTIP-----------TTMVFVTG 147
Cm-NoxD1        ------------------------------LFTGPAALP-----------ATMLFVTG 146
Pt-NoxD         -------------------------------PIWLWGDG----------LATKQLLVTG 151
An-Fre1         -AVSGPIECKQIPTPLSSISYALRTYIVVPASFTPIFSHHQRLLYGHSIPKRLDFLIVSG 276
Sc-Fre1         ----------------------VKKSLIYPSVYKDYNERTFYLWKRLPFNFTTRGKGLVV 219


Dp-Nox5A        WGLCVILGVMIPCSLPFVRKTG---------------------------------------- 176
Dp-Nox5B        WALVGILIIMGLCSLPCVRKSG---------------------------------------- 180
Hs-Nox5         VALLLLLLLMFICSSSCIRRSG---------------------------------------- 162
Lg-Nox5A        VILDVILIVMIICSMPFIRRSG---------------------------------------- 170
Lg-Nox5B        VLLCPILIVMVICSMSFVRRSG---------------------------------------- 171
Dd-NoxC         FIMISFLIIMAILSLKIIRKS---------------------------------------- 179
Mg-NoxA         HMMLLCMLLMYTTAHH-RIRQQ---------------------------------------- 167
Fg-NoxA         HIMLLCMLLMFTSAHA-RIRQQ---------------------------------------- 171
Cc-NoxA         HFMLLIMVVMYTTAHQ-KIRKQ---------------------------------------- 168
Lb-NoxA         HFMLLIMVLMYSTAHQ-KIRQQ---------------------------------------- 168
fPp-NoxA        HFMLLCMVLMYTTAHH-KVRQQ---------------------------------------- 168
Pg-NoxA         HIMLFIMVLMYTTAST-KIRTQ---------------------------------------- 174
Bd-NoxA         HIMLIIMFFMYTSAKS-DVKTK---------------------------------------- 163
Mg-NoxB         YVMLIALMGMVFTSVE-KPRRA---------------------------------------- 164
Fg-NoxB         YVMLIALMGMVLTSME-KPRRA---------------------------------------- 164
Cc-NoxB         WIMWLALGIMVWFAIE-KRRRA---------------------------------------- 175
Lb-NoxB         WIMTVSLGIMVFFASE-KRRRA---------------------------------------- 186
fPp-NoxB        WIMTAALAIMVWYAVE-KRRRA---------------------------------------- 176
Pg-NoxB         WIMTLSLGIIVWYARE-KPRRA---------------------------------------- 170
Bd-NoxB         QVISVSFFLIFTSAME-AVRRK---------------------------------------- 148
Hs-Nox2         VVITLCLILIITSSTK-TIRRS---------------------------------------- 200
Hs-Nox3         LVISLALVLIMTSSTE-FIRQA---------------------------------------- 198
Hs-Nox1         VIMTIALILMVTSATE-FIRRS---------------------------------------- 199
Lg-Nox2         VIITLCLILIVSSSTE-TIRRW---------------------------------------- 195
Nv-Nox2A        AVITLALILMLSSSTE-LIRRS---------------------------------------- 194
Nv-Nox2B        AVITLCLVVMVSSSTE-LIRRS---------------------------------------- 185
Ci-Nox2         VIITLSLFFMVTSSLE-FIRRS---------------------------------------- 211
Sp-Nox2A        AVLTLALILMFSSATE-FIRRS---------------------------------------- 212
Sp-Nox2B        AVLALTYILMFTSATE-FIR-Y---------------------------------------- 187
Mb-Nox2         VGITVPLILMVTTASQ-QIRRS---------------------------------------- 186
Hs-Nox4         VCMVVVLFLMITASTY-AIRVS---------------------------------------- 185
Nv-Nox4         MGMMLVLLIMIAASTP-IVRNR---------------------------------------- 171
Lg-Nox4         LLMALILVLIVTSSYK-HIRDS---------------------------------------- 188
Dd-NoxA         HVVCIVMVLMYTSAVESIRRP---------------------------------------- 181
Dd-NoxB         HIMLLILILIVSSSMWRIRRP---------------------------------------- 175
Ng-NoxA         NVLCIVMFIMYAASAKSYRRTK---------------------------------------- 175
Os-rboh-C       VVMVVLMAIAFTLAQPWFRRNK----------------------------------LKDSN 189
Os-rboh-G       VIMVVLMAIAYTLAHPWFRRSK----------------------------------LSDSN 189
At-rboh-D       IVMVVLMAIAFTLATPWFRRNK----------------------------------LNLPN 185
Os-rboh-A       VIMVVCMIIAFTLATRWFRRSL----------------------------------VKLPR 187
Os-rboh-B       VIMLVCMIIAFTLATRWFRRSL----------------------------------VKLPK 187
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Os-rboh-D       VAMVVLMTVSFTLATHPFRKGEKGGS-----GGGAAATV-----------LPTVARLPS 203
Os-rboh-H       IVMVVLMVVSFTLATRPLRKRE---------------------------------APRLPF 247
Os-rboh-E       ILMIIIMSFSFTLATHSFRRSV---------------------------------VKLPS 188
Os-rboh-F       ILMILIMSFSFTLATHSFRRSV---------------------------------VKLPS 188
mPp-rboh-A      VIMLVIMIIAFLLATHWFRRSL---------------------------------VKLPW 190
mPp-rboh-C      LIMVVLMILAFLLATHWFRQSL---------------------------------VKLPW 187
mPp-rboh-B      ILMVVFMIIAFLLATHWFRRSM---------------------------------VKLPW 187
mPp-rboh-D      ILMVVLMAIAMLLATHWIRRSL---------------------------------VKFPW 196
Ps-rboh-B       VILLVITCISFPLAAIPKFRQG---------------------------------------- 187
Ps-rboh-C       VILLVITCISFPLAAIPKFRQG---------------------------------------- 174
Ps-rboh-A       VAMLLCAAIAAPLC-LEKVRRG---------------------------------------- 177
Hs-Duox1        VVLLLILAIMYVFASHHFRRRS---------------------------------------- 181
Hs-Duox2        VLLLLVLAIMYVFASHHFRRRS---------------------------------------- 181
Lg-Duox1        VILTLIIIVMYVFATEYGRRHL---------------------------------------- 189
Lg-Duox2        VVVTIVIFIMYVFATQFARRNH---------------------------------------- 189
Lg-Duox3        VLLVVVLCIMYVFATQTARSHI---------------------------------------- 189
Dp-Duox         VLLFIVMIIIFVFAHPIIRKKA---------------------------------------- 189
Cb-Duox         IALVTVMCIIYVFALPCFIKRA---------------------------------------- 189
Mg-NoxC         LTALGLFYTLALLSMPQVRRWN---------------------------------------- 180
Fg-NoxC         ITALGLFWILCLLSIPQVRRWN---------------------------------------- 180
Cm-NoxD2        CALMAFLLAIVLLSLGSVRRRV---------------------------------------- 169
Cm-NoxD1        VVLMVLLVPLLGFGVETVRRKW---------------------------------------- 168
Pt-NoxD         IFLFWIFAGFFMTTLERVRRTTWG-------------------------------------- 175
An-Fre1         FWILCVLLACVNYNGAIRTSTMPQRN-----WHYTSDRTGILAYACLPFLWLFTGRNNIF 331
Sc-Fre1         LIFVILTILSLSFGHNIKLPHPYDRPRWRRSMAFVSRRADLMAIALFPVVYLFGIRNNPF 279


Dp-Nox5A        ------YFELFYWTHF-LHYPFWALLILHGPH------------------------------ 201
Dp-Nox5B        ------SFEVFYWTHL-LYIPFWVLLILHGPN------------------------------ 205
Hs-Nox5         ------HFEVFYWTHL-SYLLVWLLLIFHGPN------------------------------ 187
Lg-Nox5A        ------HFQVFYWTHI-LYVPFWILCILHATN------------------------------ 195
Lg-Nox5B        ------HFEIFYYTHM-LYIPFWILCIIHASN------------------------------ 196
Dd-NoxC         ------NFELFYYSHH-LFIGFYVLLILHGTMGWIRPPT---------------------- 211
Mg-NoxA         ------SFETFWYTHH-LFIPFFLGLYTHTVGCFVRDTVE--------------------- 200
Fg-NoxA         ------SFETFWYTHH-LFIPFFLGLYTHTVGCFVRDTPE--------------------- 204
Cc-NoxA         ------CFEAFWYTHH-LAFFFMLGLYTHATGCFVRDSVH--------------------- 201
Lb-NoxA         ------CFEAFWYTHH-LAFFFMLGLYTHATGCFVRDTVD--------------------- 201
fPp-NoxA        ------CFEAFWYTHH-LAFFFFIALWTHADGCFVRDSTN--------------------- 201
Pg-NoxA         ------CFEAFWYTHH-LAFFWALCLYTHAAGCFVRGALP--------------------- 207
Bd-NoxA         ------NFEYFWYTHH-LFVPFYFCLFFHSFGCFVKSST---------------------- 195
Mg-NoxB         ------NYERFWYTHH-FFIVFFFFWSIHGAFCMIQPDFA--------------------- 197
Fg-NoxB         ------NFERFWYTHH-MFIVFFFFWSIHGAFCMIQPDVA--------------------- 197
Cc-NoxB         ------HFERFWYSHH-LFIVFFINWQLHGMFCMIKPDRP--------------------- 208
Lb-NoxB         ------HFERFWYSHH-LFVVFFINWQLHGMFCMIKPDRP--------------------- 219
fPp-NoxB        ------NFEKFWYTHH-LFIVFFLNWQLHGMFCMIQPDRE--------------------- 209
Pg-NoxB         ------KFERFWYSHH-LFIVFFSAWQLHGMFCMIQPDRP--------------------- 203
Bd-NoxB         ------YFEIFWFTHH-LFLVFFGALLMHGSFCFIKGDSG--------------------- 181
Hs-Nox2         ------YFEVFWYTHH-LFVIFFIGLAIHGAERIVRGQTA--------------------- 233
Hs-Nox3         ------SYELFWYTHH-VFIVFFLSLAIHGTGRIVRGQTQ--------------------- 231
Hs-Nox1         ------YFEVFWYTHH-LFIFYILGLGIHGIGGIVRGQTE--------------------- 232
Lg-Nox2         ------YFELFWYTHH-LFIIFLIGFVIHGIQGIIRHQTN--------------------- 228
Nv-Nox2A        ------YFEVFWFNHH-CFVIFYIGLVLHGVQGIIRYQS---------------------- 226
Nv-Nox2B        ------YFEVFWYSHH-LFIIFFAGLVAHGCGEILRYQT---------------------- 217
Ci-Nox2         ------YFEVFWFTHH-LFIVFYGFLVVHGISMQVRGQTP--------------------- 244
Sp-Nox2A        ------YFETFWITHH-LFIVYFAMLLAHGVGGIIRSQT---------------------- 244
Sp-Nox2B        ------YFETFWLTHH-LFVIYYAMLMTHGMGGVVKYQT---------------------- 219
Mb-Nox2         ------YFELFWYTHH-LFVVFYVCLCLHGYSGFVERQDNPDTYPISLDRGVCTSRDDVL 239
Hs-Nox4         ------NYDIFWYTHN-LFFVFYMLLTLHVSGGLLKYQTNLDTHPPGC------------ 226
Nv-Nox4         ------SYEVFWFTHH-AFIAFYLMLAVHGLGGVIKHQTNLAAHTPGCK----------- 213
Lg-Nox4         ------NYEVFYYTHR-LIFIFYGLLLIHAVK------------------------------ 213
Dd-NoxA         ------MFEGFWYTHH-LFVVFFGLLVVHGLHSILEP------------------------ 211
Dd-NoxB         ------MFEIFWYVHH-LFIPFYILLCFHGYSKILKKD---------------------- 206
Ng-NoxA         ------NFTVFWYAHH-LFVVFFVLLLVHG------------------------------- 198
Os-rboh-C       PLKKMTGFNAFWFTHH-LFVIVYTLLFVHGTCLYLSRKWY--------------------- 228
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Os-rboh-G       PLKRLSGFNMFWYSHH-LFVIVYIAFVVHGVCLYINRTWW-------------------- 228
At-rboh-D       FLKKLTGFNAFWYTHH-LFIIVYALLIVHGIKLYLTKIWY-------------------- 224
Os-rboh-A       PFDKLTGFNAFWYSHH-LFIIVYIALIVHGECLYLIHVWY-------------------- 226
Os-rboh-B       PFDKLTGFNAFWYSHH-LFIIVYISLVIHGEWLYLIRIWY-------------------- 226
Os-rboh-D       PFNRLAGFNAFWYSHH-LLGIVYALLIAHGYFLFLVRRWY-------------------- 242
Os-rboh-H       PLGHLAGFNAFWYSHH-LLIVVYLLLLVHGWFMFLVTKWH-------------------- 286
Os-rboh-E       PLHHLAGFNAFWYAHH-LLVLAYVLLVVHSYFIFLTREWY-------------------- 227
Os-rboh-F       PLHHLAGFNAFWYAHH-LLVIAYILLVLHSYFIFLTKQWY-------------------- 227
mPp-rboh-A      PFHRLMGFNAFWYSHH-LFVIVYALLLLHGTKLLLPSPWH-------------------- 229
mPp-rboh-C      PFHRLTGFNAFWYSHH-LFAIVYAFLLLHGSKLLLPNSIL-------------------- 226
mPp-rboh-B      PLQRLTGFNAFWYSHH-LFVIVYALLMVHSIKLLLAGPWY-------------------- 226
mPp-rboh-D      PLHRLTGFNTFWYSHH-LFVIVYALLLVHSIKLLLAGSWY-------------------- 235
Ps-rboh-B       ------KFNVFWYSHM-LFGPFLLVLCFHGACSWLAR------------------------ 217
Ps-rboh-C       ------KFNLFWYSHM-LFGPFLVVLAFHGATSWLAR------------------------ 204
Ps-rboh-A       ------KFNLFWVSHM-LFIPFLVLMAFHGFARWVAA------------------------ 207
Hs-Duox1        -------FRGFWLTHH-LYILLYVLLIIHGSFALIQL------------------------ 210
Hs-Duox2        -------FRGFWLTHH-LYILLYALLIIHGSYALIQL------------------------ 210
Lg-Duox1        -------FNAFWFTHN-FYVFLYIFLILHGIGRLVQD------------------------ 218
Lg-Duox2        -------FTAFWLTHS-LYLTVYPLTILHGIGVLVQA------------------------ 218
Lg-Duox3        -------FNLFWLTHK-LFIIMYVLVILHGASIIVQK------------------------ 218
Dp-Duox         -------YNFFWMTHS-LYIVLYILSVLHGLGRLTAE------------------------ 218
Cb-Duox         -------YHAFRLTHL-LNIAFYALTILHGLPKLLDS------------------------ 218
Mg-NoxC         -------YEVFQLAHL-LMFPIIGLLAAHGTAQLLQYAMFG-------------------- 213
Fg-NoxC         -------YEVFQLGHL-LMFPIIGLMMAHGTAALLQWPMFG-------------------- 213
Cm-NoxD2        -------YRVFWASHVPLAILTYAALVFHGLRGGR--------------------------- 197
Cm-NoxD1        -------FRLFWWTHRPIAVLVYICLVFHGLRGGR--------------------------- 196
Pt-NoxD         -------FRLFWVAHMISITCVLPLLIIHGTIRGK--------------------------- 203
An-Fre1         LWATNFDIQSFSTFHRHIAWACTLLAIVHSIGYSIILADYEDAYHEAWSHKPWYMG---- 387
Sc-Fre1         IPITGLSFSTFNFYHKWSAYVCFMLAVVHSIVMTASGVKRGVFQSLVRKFYFRWG----- 334
                          *   *            *

Dp-Nox5A        ------------------------------------------------------------
Dp-Nox5B        ------------------------------------------------------------
Hs-Nox5         ------------------------------------------------------------
Lg-Nox5A        ------------------------------------------------------------
Lg-Nox5B        ------------------------------------------------------------
Dd-NoxC         ------------------------------------------------------------
Mg-NoxA         --------------------PHSPFAGDEY----------------------WNHCIGYL 218
Fg-NoxA         --------------------AFSPFAGDEF----------------------WEHCIGYL 222
Cc-NoxA         --------------------PNLTSTFPFYS---------------------TENCIGYL 220
Lb-NoxA         --------------------PDYIPTFPFYS---------------------TEHCLGYL 220
fPp-NoxA        --------------------AAYIDTFPFYN---------------------AEFCLGYE 220
Pg-NoxA         --------------------DHK-------------------------------AQCLGYN 217
Bd-NoxA         ------------------------------------------------------TGKCKGYN 203
Mg-NoxB         --------------------PFCMS-----------------------------FGTSAIGV 210
Fg-NoxB         --------------------PFCTS-----------------------------IGSSAIGV 210
Cc-NoxB         --------------------PYCS-------------------------------FNTIGV 218
Lb-NoxB         --------------------PYCS-------------------------------SNTIGV 229
fPp-NoxB        --------------------PFCT-------------------------------WNSIGV 219
Pg-NoxB         --------------------PYCS-------------------------------FNQIGV 213
Bd-NoxB         --------------------DPCR---------------------------------GGPM 189
Hs-Nox2         ------------------ESLAVHNITVCE-------QKISEWG-KIKECPIPQFAGNPPM 268
Hs-Nox3         ------------------DSLSLHNITFCR-------DRYAEWQ-TVAQCPVPQFSGKEPS 266
Hs-Nox1         ------------------ESMNESHPRKCA-------ESFEMWDDRDSHCRRPKFEGHPPE 268
Lg-Nox2         ------------------VSS--HNPEKCY-------TRHDEWG-TSPDCKIPQFAGSSPK 261
Nv-Nox2A        ------------------NVDKHDPEIC--------MNHTLWYNHPKCMEPPKFVPFGMN 260
Nv-Nox2B        ------------------NMDKHDPDVCRK-----QENLATWGVKDPCRVLPEFEAAGAM 254
Ci-Nox2         ------------------QSLTVHDPIRCS------TIDPATWSQNN-CP-TPVFAGSPPM 279
Sp-Nox2A        ------------------NLDRHDVVFCS-------ENLDVWGPTSAQCEDPVFKDGSAA 279
Sp-Nox2B        ------------------NVDEHDPVECM-------VDEETFDQCVID-NPPLFAGTPGA 253
Mb-Nox2         VSNGCASWNAVVSALANQNSSLTEPNLCIPGGVDVGDEEDAFCCPCRLVTQAVLQRGQAA 299
Hs-Nox4         ISLNR---TSSQNISLPEYFSEHFHEPFPEGFSKP-AEFTQHKFVKICMEEPRFQANFPQ 282
Nv-Nox4         VPLNDSMDTPFNMTSLPLCREAEFAPDQPQVYHKSNTQVYQKPYHTVYCK--CYHTGIPQ 271
Lg-Nox4         ------------------------------------------------------------E 214
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Dd-NoxA          ------------------------------------------------------------TS 213
Dd-NoxB          ------------------------------------------------------------PQ 208
Ng-NoxA          ------------------------------------------------------------KQ 200
Os-rboh-C        ------------------------------------------------------------KKT 231
Os-rboh-G        ------------------------------------------------------------KQT 231
At-rboh-D        ------------------------------------------------------------QKT 227
Os-rboh-A        ------------------------------------------------------------RRT 229
Os-rboh-B        ------------------------------------------------------------KRT 229
Os-rboh-D        ------------------------------------------------------------LKT 245
Os-rboh-H        ------------------------------------------------------------QRT 289
Os-rboh-E        ------------------------------------------------------------KKT 230
Os-rboh-F        ------------------------------------------------------------NRT 230
mPp-rboh-A       ------------------------------------------------------------ERT 232
mPp-rboh-C       ------------------------------------------------------------ERS 229
mPp-rboh-B       ------------------------------------------------------------KRT 229
mPp-rboh-D       ------------------------------------------------------------KRT 238
Ps-rboh-B        --------------------------------------------------------------SS 219
Ps-rboh-C        ------------------------------------------------------------CS 206
Ps-rboh-A        ------------------------------------------------------------PQ 209
Hs-Duox1         ------------------------------------------------------------PR 212
Hs-Duox2         ------------------------------------------------------------PT 212
Lg-Duox1         ------------------------------------------------------------PL 220
Lg-Duox2         ------------------------------------------------------------PI 220
Lg-Duox3         ------------------------------------------------------------PL 220
Dp-Duox          ------------------------------------------------------------PN 220
Cb-Duox          ------------------------------------------------------------PK 220
Mg-NoxC          ------------------------------------------------------------
Fg-NoxC          ------------------------------------------------------------
Cm-NoxD2         ------------------------------------------------------------LW 199
Cm-NoxD1         ------------------------------------------------------------PW 198
Pt-NoxD          ------------------------------------------------------------PI 205
An-Fre1          ---------VIAIIAMSVLLIHSVTWLRRKWYEVFLLSHIILAIVIIYALFQHTRPDGPQ 438
Sc-Fre1          ------------IVATILMSIIIFQSEKVFRNRGYEIFLLIHKAMNIMFIIAMYYHCHTLG 383


Dp-Nox5A         FWYWLVGPGALFIILEKLLRLRNRMTGKGRTFINYAILLPSS------------------- 243
Dp-Nox5B         FWYWFIGPGILFFIEG-TGRFRLRVTGKGRTFISSALLLPSR------------------- 246
Hs-Nox5          FWKWLLVPGILFFLEK---AIGLAVSRMAAVCIMEVNLLPSK------------------- 226
Lg-Nox5A         FWYWFIIPGIIFIIESLNRSKYIKKAAYGATYITNVYLLPYR------------------- 237
Lg-Nox5B         FWKWFIAPGLIFFVESILRSKPMKLATHGRTFIKEVNLLPSG------------------- 238
Dd-NoxC          FWKWFIVPGFFYTVDR----SFRLFKRTHRVEVLDYCLKNER------------------- 249
Mg-NoxA          GWRWELWTGGFYLLER-----------LYREIRARRETKITR-VVRHPYGEFFFFLFFLL 266
Fg-NoxA          GWRWELWTGGAYLLER-----------LWREVRARRSTKITR-VVRHPY----------- 259
Cc-NoxA          SWRFIIWPGIIYFGER-----------VWREIRARRATRLSK-VLVHPSG---------- 258
Lb-NoxA          SWRFIIWPGIIYFGER-----------VWREIRARRATRLSK-VLVHPSG---------- 258
fPp-NoxA         SWRFTIWPGIIYFGER-----------VWREVRARRATRLSK-VLVHPSG---------- 258
Pg-NoxA          SVYVTVWSGLAYFCDR-----------VFREIRGRGRSEISA-VLIHPSG---------- 255
Bd-NoxA          TNYGTVPIFCVYIAER-----------LLREYRARLPTVLSK-VIFHSGN---------- 241
Mg-NoxB          FWQFWMYGGFVYMAER-----------IAREIRGKHKTYISK-VIQHPSN---------- 248
Fg-NoxB          FWQFWMYSGFCYLAER-----------IAREVRGRHRTFISK-VIQHPSN---------- 248
Cc-NoxB          FWRYWLVGGVIWIWER-----------ILREIRSRHRTHIHK-VIQHPSS---------- 256
Lb-NoxB          FWRYWLIGGVIWISER-----------VLREIRSRHRTYVSK-VIQHPSN---------- 267
fPp-NoxB         FWRYWLTGGVIFTFER-----------ILREVRSRHRTYISK-VIQHPSN---------- 257
Pg-NoxB          FWKYWLVGGTIFIWER-----------VLREVRSRHKTYISK-VIQHPSN---------- 251
Bd-NoxB          FWKFWVGSAAFYLIER-----------LWREISGRRKTYIFK-VVQHPSK---------- 227
Hs-Nox2          TWKWIVGPMFLYLCER-----------LVRFWRSQQKVVITK-VVTHPFK---------- 306
Hs-Nox3          AWKWILGPVVLYACER-----------IIRFWRFQQEVVITK-VVSHPSG---------- 304
Hs-Nox1          SWKWILAPVILYICER-----------ILRFYRSQQKVVITK-VVMHPSK---------- 306
Lg-Nox2          SWIWILIPVIIFIIER-----------GIRFYRSLQQVVITK-VVKHPSN---------- 299
Nv-Nox2A         TWRWVVGPMFLYCIER-----------LIRFVRSHQAIQIIK-VVKHPSN---------- 298
Nv-Nox2B         TWKIVLLPMVIYFLER-----------CLRFWRSMQQVKVVKVVVKHPSR---------- 293
Ci-Nox2          TWKWVIAPMVLYVIER-----------IIRLVRFNQQVEVLK-VIKHPSR---------- 317
Sp-Nox2A         SYKWVSGPLFIYLLER-----------TIRFWRSCQTVTLTK-VVKHQSK---------- 317
Sp-Nox2B         SWKWCVTPLCVYFLER-----------ILRMIRTWPDVTIVQ-VVQHQSK---------- 291
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Mb-Nox2         TWVWVIGPLILYILER-----------LYRWYKSQTRRLRILKVVKHKDS---------- 338
Hs-Nox4         TWLWISGPLCLYCAER-----------LYRYIRSNKPVTIIS-VMSHPSD---------- 320
Nv-Nox4         SWKLLILPLSIYLIDR-----------LIRVVRGYQEVTVIK-VVNHPCG---------- 309
Lg-Nox4         SWVWIVVPLILYIVDG-----------IIRIFN-RKTTTITK-ITAYTGD---------- 251
Dd-NoxA         FWKWVIGPCALYIVER-----------LIRLLRSKKTTMLIQ-ARIHPSR---------- 251
Dd-NoxB         SWMWIIAPFILYSIER-----------LIRIARSKKRVILEK-AIMHPSK---------- 246
Ng-NoxA         FWAWFFIPMALYALER-----------VMRNLRGSEMTIVKR-VHCLASR---------- 238
Os-rboh-C       TWMYLAVPVVLYVSER-----------ILRLFRSH--DAVGIQKVAVYPG---------- 268
Os-rboh-G       TWMYLAIPILLYAGER-----------IFRALRSHGFTTVRIEKVAIYPG---------- 270
At-rboh-D       TWMYLAVPILLYASER-----------LLRAFRSS-IKPVKMIKVAVYPG---------- 265
Os-rboh-A       TWMYLSVPVCLYVGER-----------ILRFFRSG-SYSVRLLKVAIYPG---------- 267
Os-rboh-B       TWMYLAVPVCLYVGER-----------TLRFFRSG-SYSVRLLKVAIYPG---------- 267
Os-rboh-D       TWMYISVPLMLYVGER-----------MLRALRSN-AYAVKILKVCLLPG---------- 283
Os-rboh-H       TWMYIAVPLMLYVGER-----------TLRAFRSK-AYAVKILKVCLLPG---------- 327
Os-rboh-E       TWMYLIVPVLFYACER-----------TIRKVREN-NYRVSIVKAAIYPG---------- 268
Os-rboh-F       TWMFLAVPVLFYSCER-----------TIRRVRES-SYGVTVIKAAIYPG---------- 268
mPp-rboh-A      TWMYIAVPLLLYAGER-----------LLRMYRTN-SSKVDVIKAAIYSG---------- 270
mPp-rboh-C      TWIYIAVPLVLYAGER-----------FLRMYRTN-SSKVDVIKAAIYTG---------- 267
mPp-rboh-B      TWMYIAIPLLLYAGER-----------MLRLYRTN-SSKVEIVKAAIYTG---------- 267
mPp-rboh-D      IWMYTAVPLVLYASER-----------FLRLYRTN-YSKVEVVKAAVYTG---------- 276
Ps-rboh-B       SYIWITPPFLIYLIER-----------RFRYAKMF--AAPVRIMEAMELD---------- 256
Ps-rboh-C       AYIWITPPFLMYLIER-----------RFRYAKMF--AAPVRIMEAMELD---------- 243
Ps-rboh-A       AHYWVLPPIVIYLVEK-----------RYRMTQMF--GGQTQIAHVQLSK---------- 246
Hs-Duox1        FHIFFLVPAIIYGGDK-----------LVSLSRKKVEISVVKAELLPSG---------- 250
Hs-Duox2        FHIYFLVPAIIYGGDK-----------LVSLSRKKVEISVVKAELLPSG---------- 250
Lg-Duox1        FPYFFLGPLVVFVLDK-----------MVSLSRNKVEIVVKKAEILPSG---------- 258
Lg-Duox2        FPYYLFGPLVLFVFDK-----------LASLSRNRVEIRVKKVSILPSD---------- 258
Lg-Duox3        FFAYFIGPAALFTLDK-----------MISLSRKKTEINIVKAINLPSD---------- 258
Dp-Duox         FWVFLIGPAIVYTLDK-----------IISLRTKFMGLDIIETVLLPSD---------- 258
Cb-Duox         FGYYVLGPVIIFVIDR-----------IIGLMQYYKKLEIVSAEILPSD---------- 258
Mg-NoxC         --YWLAVPTILVLTER-----------LVRVGTGFHRIPASLKVLDDETV---------- 250
Fg-NoxC         --YFLAFPTLLVLVER-----------TVRVGLGFHRIKATMKVLDKETV---------- 250
Cm-NoxD2        SVYFFGLPVVLYILDR-----------LYHSFAAAFTPHRVLSVELSHKNS---------- 239
Cm-NoxD1        TVYFFAGPVFLYIIDR-----------LYQLSRATVTPRRILVLSLAQANS---------- 238
Pt-NoxD         LMYTASLPIAIYIVDS----------FMRRMMYKTVQAGVVRFQAFGGEGQGGGE----- 250
An-Fre1         WNPYLRTVVAIWMFDR--------IFRIARIAYCNLQIRFSELQISLPSSSVTYNPDS-- 488
Sc-Fre1         WMGWIWSMAGILCFDR-----------FCRIVRIIMNGGLKTATLSTTDDS---------- 423


Dp-Nox5A        ------------------VTHLVCRKPP-NFNFHA----GDYVYLNIPAIAS------YEW 275
Dp-Nox5B        ------------------VTHLVIRKPE-NFNFNP----GDYVFVKIPAITA------SEW 278
Hs-Nox5         ------------------VTHLLIKRPP-FFHYRP----GDYLYLNIPTIAR------YEW 258
Lg-Nox5A        ------------------VIHLVISRPP-KWRYRP----GDYVFIQIPAIAK------YEW 269
Lg-Nox5B        ------------------VTHLVISRPP-NFDFKP----GDYLFIQIPMLAK------YEW 270
Dd-NoxC         ------------------VINLTFSKPP-SFDYKP----GQYLLINVPHISK------LQW 281
Mg-NoxA         FGPSMVGFSVLIRDSADVVEIQFNKPS--FKYKA----GQWLFLQVPSVSK------YQW 314
Fg-NoxA         ----------------DVVEIQFNKPS--FKYKA----GQWLFLQVPSLSK------YQW 291
Cc-NoxA         ------------------AMELRIVKP---FKYTA----GQWLFLQVPELSR------FQW 288
Lb-NoxA         ------------------AMELRIIKPS--FKYTA----GQWLFIQIPELSR------FQW 289
fPp-NoxA        ------------------AMELRIVKPS--FKYVA----GQWLFIQVPEVSK------FQW 289
Pg-NoxA         ------------------TVEIRMLKAG--FKYVP----GQWIFFQMPEVSR------FQW 286
Bd-NoxA         ------------------TMELRIEKPS--FQYMP----GQYLFLNIPSISA------FQW 272
Mg-NoxB         ------------------VCEIQIKKEH--TKTRA----GQYIFFCCPEVSV------WQY 279
Fg-NoxB         ------------------VCEIQMKKEH--TKTRA----GQYIFLCCPAVSL------WQY 279
Cc-NoxB         ------------------VMEVQIKKEK--TTTRA----GQYIFLSCPEISY------FQW 287
Lb-NoxB         ------------------VMELQIKKEK--TTTRA----GQYIFLSCPEISY------FQW 298
fPp-NoxB        ------------------VMELQIKKEK--TTTRA----GQYIFLSCPEISY------FQW 288
Pg-NoxB         ------------------VCEVQIKKEK--TTTRA----GQYIFLNCPEVSY------WQW 282
Bd-NoxB         ------------------VVEVQIKKNG--WKMQA----GQYIFICCPEIGL------FEW 258
Hs-Nox2         ------------------TIELQMKKKG--FKMEV----GQYIFVKCPKVSK------LEW 337
Hs-Nox3         ------------------VLELHMKKRG--FKMAP----GQYILVQCPAISS------LEW 335
Hs-Nox1         ------------------VLELQMNKRG--FSMEV----GQYIFVNCPSISL------LEW 337
Lg-Nox2         ------------------VFELQIRKKS--FYADP----GQYIFLHCPSISL------LEW 330
Nv-Nox2A        ------------------VIEIKMKKAG--FRPEV----GQYIFLQCPKISK------LEW 329
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Nv-Nox2B        -----------------VVEIQMKKPG--FVCEA----GQYVFLQVPKISQ------LEW 324
Ci-Nox2         -----------------VLEIQMRKNG--FFAEV----GQYVFIMCPQLSQ------LEW 348
Sp-Nox2A        -----------------VIELQMKKKG--FKMEA----GQYIFLKCPSISH------VQW 348
Sp-Nox2B        -----------------VIELRMKKQG--FKMLP----GQYIFLKCSPISK------VQW 322
Mb-Nox2         -----------------VPVMEIQFQK--VPTKA----GQYVFINCPKINS------LEW 369
Hs-Nox4         -----------------VMEIRMVKEN--FKARP----GQYITLHCPSVSA------LEN 351
Nv-Nox4         -----------------VIELHMKKSG--FYAEP----GQFVYVRCHSVAR------FEW 340
Lg-Nox4         -----------------VIELQLKCDG--LKAIP----GQYVLLKCPRISL------FEW 282
Dd-NoxA         -----------------VIEVRMKTER--FKYKP----GQYLFLNCPTIAQ------NEW 282
Dd-NoxB         -----------------VLELRMKRDNDNFNFKP----GQYLYLNCPSIAY------HEW 279
Ng-NoxA         -----------------VIHLELEKPS--FRYES----GQYCFLNCPMISQ------HEW 269
Os-rboh-C       -----------------NVLALYMSKPP-GFRYR----SGQYIFIKCTAVSP------YEW 301
Os-rboh-G       -----------------NVIAIHMTKPH-GFKYK----SGQYIYVNCG---------------- 296
At-rboh-D       -----------------NVLSLHMTKPQ-GFKYK----SGQFMLVNCRAVSP------FEW 298
Os-rboh-A       -----------------NVLTLQMSKPP-TFRYK----SGQYMFVQCPAVSP------FEW 300
Os-rboh-B       -----------------NVLTLQMSKPP-TFRYK----SGQYMFVQCPAVSP------FEW 300
Os-rboh-D       -----------------NVLTITMSKPY-GFRYR----SGQYIFLQCPTISP------FEW 316
Os-rboh-H       -----------------NVLTITMSKPY-GFRYR----SGQYIFLQCPTISP------FEW 360
Os-rboh-E       -----------------NVLSLHMKKPP-GFKYK----SGMYLFVKCPDVSP------FEW 301
Os-rboh-F       -----------------NVLSIHMNKPS-SFKYK----SGMYMFVKCPDVSP------FEW 301
mPp-rboh-A      -----------------NVLAIHMSKPE-GFKYK----SGMYLFLQCPEISS------FEW 303
mPp-rboh-C      -----------------NVLAIHMSKPE-GFKYK----SGMYLFLQCPEISS------FEW 300
mPp-rboh-B      -----------------NVLAIHITKPQ-GFKYK----SGMYLFLQCPQISS------FEW 300
mPp-rboh-D      -----------------NVLAIHMTKPA-GFKYK----SGMYLFLQCPAISS------FEW 309
Ps-rboh-B       -----------------GTVALFMEKPR-RFVYR----PGMYMFVNCPLISS------HEW 289
Ps-rboh-C       -----------------STVALFIEKPR-RFVYR----PGMYLYINCPQISS------HEW 276
Ps-rboh-A       -----------------EAVAVFMRKPK-AFSKRQRFLPGMYVFVNVPTISK------FEW 283
Hs-Duox1        -----------------VTHLRFQRPQ-GFEYKS----GQWVRIACLALGT------TEY 282
Hs-Duox2        -----------------VTYLQFQRPQ-GFEYKS----GQWVRIACLALGT------TEY 282
Lg-Duox1        -----------------VTNLVFKRPL-NFDYKS----GQWVRIACLDLGQ------SEY 290
Lg-Duox2        -----------------VTELVFRRPA-NFDYRS----GQWVRIACLKLGK------GEY 290
Lg-Duox3        -----------------VTMLEFKRPP-KFEYKS----GQWVRIACLSHGS------NEY 290
Dp-Duox         -----------------VLKVKFYRPP-NFKYLS----GQWIRLSCTGVKP------EEF 290
Cb-Duox         -----------------IIYIEFRRPR-TFQYKS----GQWITVSSPSISCTF----NES 292
Mg-NoxC         -----------------ELRATIPSER-IWKYQA----GQWAYLQVPTISM------WQW 282
Fg-NoxC         -----------------EVTAIIPSER-LWKYKA----GQYIFLQVPKISF------FQW 282
Cm-NoxD2        -----------------NVVRLVLERRG--RKFVA----GQYFKLAWKFHVCSHLAVAGEW 277
Cm-NoxD1        -----------------NIVKLSVERRN--AVYLP----GQYFKIMIIDTRKGCGMPADAW 276
Pt-NoxD         -----------------KVVELILRSSA--YKYRP----GQYAEIQIPELSR------YEW 282
An-Fre1         -----------------DLIMIDTEAPP-HLALKP----GQHYFISQPLSVH-----CLES 522
Sc-Fre1         -----------------NVIKISVKKPK-FFKYQVG--AFAYMYFLSPKSAWFYS---FQS 461


Dp-Nox5A        HPFTISSAPELP-------DLIWFHIRGVGGWTNKLYEYFKQEQIKQY-----EFEHHSL 323
Dp-Nox5B        HPFTISSAPELP-------DVMWLHIRCAGGWTNKLYDYFEREQAKLCLKQSAQNQQHNG 331
Hs-Nox5         HPFTISSAPEQK-------DTIWLHIRSQGQWTNRLYESFK---------------------- 292
Lg-Nox5A        HPFTISSAPEQE-------GTFWLHIRSAGHWTNKLYDYFDSYDPNTY------------- 310
Lg-Nox5B        HPFTISSAPEME-------GFIWLHIRSAGYWTKSLYDFFEKYGSDQR------------- 311
Dd-NoxC         HPFTMTSSP-LE-------DKIYVHIRVTGNWTKKLFRWLSIKKQLQQ------------- 321
Mg-NoxA         HPFTITSCPYD--------PYVSVHVRQVGDFTKALGDATGAGAAQAKLYEG-------- 358
Fg-NoxA         HPFTITSCPFD--------PYVSVHVRQVGDFTRELGDALGAGAAQAKLYDD-------- 335
Cc-NoxA         HPFTITSAPED--------PYVSVHIRQVGDFTNALGERLGVGPAAVASMTKAAVKGAEK 340
Lb-NoxA         HPFTITSAPED--------PYVSIHIRQVGDFTRGLGDRLGVGPSDKMSG---------- 331
fPp-NoxA        HPFTITSAPED--------PYVSVHIRQVGDFTQALGDRVGAGPSVVAAMTKAAMIGSEK 341
Pg-NoxA         HPFTISSAPDD--------PYISIHVRQVGDFTKAVGTRLGATPQLMATLNQPSE----- 333
Bd-NoxA         HPFTISSSPEE--------GFVSIHIRIVGDWTKNAAKMLGCYEQDIEKR---------- 314
Mg-NoxB         HPFTLTSAPEE--------DYISIHMRVVGDFTRGVSKALGCDWDRK---GDASKVV--- 325
Fg-NoxB         HPFTLTSAPEE--------DYISIHMRCVGDFTKELAKSLGCDWSKKKDAGDASKVV--- 328
Cc-NoxB         HPFTLTSAPEE--------DFISVHIRVAGDWTTAFSKALGCDFERK---KKGDD----- 331
Lb-NoxB         HPFTLTSAPEE--------DYISVHIRVVGDFTQALAKAMGCDFEKK---GKEETPA--- 344
fPp-NoxB        HPFTLTSAPEE--------DYISVHIRIVGDFTRELAAAVGCDFDSK---EKGVEA---- 333
Pg-NoxB         HPFTLTSAPEE--------DYISVHIRCVGDFTMEFAEALGCDFSRN---KEKSN----- 326
Bd-NoxB         HPFTLTSSPHE--------EFLSIHIRVVGDWTEKFAERVGCRFGGS------------- 297
Hs-Nox2         HPFTLTSAPEE--------DFFSIHIRIVGDWTEGLFNACGC--DKQE------------ 375
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Hs-Nox3         HPFTLTSAPQE--------DFFSVHIRAAGDWTAALLEAFGA--EGQA------------ 373
Hs-Nox1         HPFTLTSAPEE--------DFFSIHIRAAGDWTENLIRAFEQ--QYS------------- 374
Lg-Nox2         HPFTLTSAPGE--------ETITVHVRRVGDWTEKLAKSCHV--DEGE------------ 368
Nv-Nox2A        HPFTLTSAPEE--------DTFSVHIRIVGDWTGDLAKLCGY--KGQK------------ 367
Nv-Nox2B        HPFTLTSAPEE--------DYFSLHIRVVGNWTTDLANQLG---AGNQ------------ 361
Ci-Nox2         HPFTLTSAPEE--------DYFSIHVRIVGDWTTGLSKVLGADEAGNE------------ 388
Sp-Nox2A        HPFTLTSAPEE--------DHFSVHIRVVGDWTRDLFKAMGA--DKPE------------ 386
Sp-Nox2B        HPFTLTSAPEE--------DYFSLHIRRVGDWTDELAVKMGA--DQAE------------ 360
Mb-Nox2         HPITLTSCPEL--------DYVSVHIRLVGDWTTKLADACGF--YEDN------------ 407
Hs-Nox4         HPFTLTMCPTETK------ATFGVHLKIVGDWTERFRD-LLLPPSSQDSEI--------- 395
Nv-Nox4         HPFTLTKCPSSKD------DSFSIHIKRTGDWTKSLSDQKPLLAALDDSGS--------- 385
Lg-Nox4         HPYSITKCPDKSS------SGFNLCLRHKGDWSGNIHK--------AFNTE--------- 319
Dd-NoxA         HPFTITSAPEE--------DFVSCHINVVGNWTGKLSTLLNPDKKMGIVQEN--------- 326
Dd-NoxB         HPFTITSAPDD--------PFISVHINIVGNWTRKLFKLLNPDNKLGLIQED--------- 323
Ng-NoxA         HPFTISSAPEE--------EFLQFHIRCVGDWTNTLMDVFNPAQRP-TVEIN--------- 312
Os-rboh-C       HPFSITSAPGD--------DYLSVHIRTRGDWTSRLRTVFSEACRPPTEGESGLLRADLS 353
Os-rboh-G       ----------------------------------------EICRPPMNGQSGLLRADCM 315
At-rboh-D       HPFSITSAPGD--------DYLSVHIRTLGDWTRKLRTVFSEVCKPPTAGKSGLLRADGG 350
Os-rboh-A       HPFSITSAPGD--------DYLSIHVRQLGDWTRELKRVFAAACEPPAGGKSGLLRADET 352
Os-rboh-B       HPFSITSAPGD--------DYLSIHVRQLGDWTRELKRVFSAACEPPVGGKSGLLRADET 352
Os-rboh-D       HPFSITSAPGD--------DYLSVHIRTNGDWTQELKRIFVENYFSPHLNRRASFSELGA 368
Os-rboh-H       HPFSITSAPGD--------DYISVHIQTRGDWTQELKRIFVENYFVPSVPRRASFGALGM 412
Os-rboh-E       HPFSITSAPGD--------DYLSVHIRTLGDWTTELRNLFGKACEAQVTSKKATLSRLET 353
Os-rboh-F       HPFSITSAPGD--------DYLSVHIRTLGDWTTELRNLFGKACEAQVSSKKATLARLET 353
mPp-rboh-A      HPFSITSAPED--------PFLSVHIRTLGDWTGEMMKIFADACGGRMRLQTVNNYGFIL 355
mPp-rboh-C      HPFSITSAPED--------PFLSVHIRTLGDWTAELKRIFSDACGGRMRLQTVNNYG--L 350
mPp-rboh-B      HPFSITSAPGD--------PFLSVHIRTLGDWTAEMKKIFSEACGGRTCLQTINNYG--L 350
mPp-rboh-D      HPFSITSAPDD--------PFLSVHIRTLGDWTTEMRKIFSDSLGGKTRLQAINDYG--L 359
Ps-rboh-B       HPFTISSAPGD--------NYISVHIRVCGDWTQALARVIADCHERKVL----------- 330
Ps-rboh-C       HPFTISSAPGD--------NYISIHIRVCGDWTDAMARVIADCHACNLQ----------- 317
Ps-rboh-A       HPFTISSAPED--------KFISLHIQRSGDWTRALYDNLQQHQASRVEDQGSPVTS--- 332
Hs-Duox1        HPFTLTSAPHE--------DTLSLHIRAAGPWTTRLREIYSAPTGDRC------------ 322
Hs-Duox2        HPFTLTSAPHE--------DTLSLHIRAVGPWTTRLREIYSSPKGNGC------------ 322
Lg-Duox1        HPFTLTSAPQE--------ENLSLHIRAVGPWTTNIRRVYDINNIVSE------------ 330
Lg-Duox2        HPFTLTSAPHE--------ENLSLHIRAVGPWTKNLRKIYEFYSIGN------------- 329
Lg-Duox3        HPFTLTSAPHE--------DTLKVHIRALGPWTWNIRQTFDLENLKD------------- 329
Dp-Duox         HSFTLTSAPHE--------NFLSCHIKAQGPWTWKLRNYFDPSNFNPK------------ 330
Cb-Duox         HAFSIASSPQD--------ETVKLYIKAVGPWTWKLRSELLR-AQNTG------------ 331
Mg-NoxC         HPFTISVCVGK---------EMRMHIKTDGNWTGRLRDLAKDAPQG--------------- 319
Fg-NoxC         HPFTVSFCRGN---------KMMLHIKTDGNWTAKLRELGGDS------------------ 316
Cm-NoxD2        HPFTVASSPLLDK------DRIIFFIAATGKWTNALRALALQQHQQQHDENLEHASSTSP 331
Cm-NoxD1        HPFTAASAPSCDS------DRITFYIAAVGKWTRRLHSLA--------EAAVAEAATTTA 322
Pt-NoxD         HPFTIASAPNSD-------NTVSFCIKALGRWTNGLFDLADTFQGGDVEEPK-------- 327
An-Fre1         HPFALGAYAQASSRSLKEKSRLTFYIRPYNGWTKTLRDRCSRAKN---------------- 567
Sc-Fre1         HPFTVLSERHRDPNNP---DQLTMYVKANKGITRVLLSKVLSAPNHTVD------------ 507


Dp-Nox5A        RPASPFVSSDQSAFQTNVSFGNQSATIASAKNATENQSPFGWTKTYRPYNPQISITLSEV 383
Dp-Nox5B        GAGEPACRHCQRILGNDASFSTQN-IMKGVRRLTRTFSNKNPVDKYDQLES-CRMTLRPL 389
Hs-Nox5         -ASDPLGR-------------------GSKRLSRSVTMRKSQRSSK------------- 318
Lg-Nox5A        -QYGTFNKGFG------------LDVMEAGGTIEEGTYRRLSSTGNTD------------ 345
Lg-Nox5B        -RKSTITGQIN------------KAFHDGLDKIERG-IKEVSTSFTHR------------ 345
Dd-NoxC         -------------------------QQQLYNNIKQQNVLPDGSNFIIN------------ 344
Mg-NoxA         ------------------------------------------------------------
Fg-NoxA         ------------------------------------------------------------
Cc-NoxA         ------------------------------------------------------------
Lb-NoxA         ------------------------------------------------------------
fPp-NoxA        ------------------------------------------------------------
Pg-NoxA         ------------------------------------------------------------
Bd-NoxA         ------------------------------------------------------------
Mg-NoxB         ------------------------------------------------------------
Fg-NoxB         ------------------------------------------------------------
Cc-NoxB         ------------------------------------------------------------
Lb-NoxB         ------------------------------------------------------------
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fPp-NoxB        ------------------------------------------------------------
Pg-NoxB         ------------------------------------------------------------
Bd-NoxB         ------------------------------------------------------------
Hs-Nox2         ------------------------------------------------------------
Hs-Nox3         ------------------------------------------------------------
Hs-Nox1         ------------------------------------------------------------
Lg-Nox2         ------------------------------------------------------------
Nv-Nox2A        ------------------------------------------------------------
Nv-Nox2B        ------------------------------------------------------------
Ci-Nox2         ------------------------------------------------------------
Sp-Nox2A        ------------------------------------------------------------
Sp-Nox2B        ------------------------------------------------------------
Mb-Nox2         ------------------------------------------------------------
Hs-Nox4         ------------------------------------------------------------
Nv-Nox4         ------------------------------------------------------------
Lg-Nox4         ------------------------------------------------------------
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Ng-NoxA         ------------------------------------------------------------
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Lg-Duox2        ------------------------------------------------------------
Lg-Duox3        ------------------------------------------------------------
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Cb-Duox         ------------------------------------------------------------
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Fg-NoxC         ------------------------------------------------------------
Cm-NoxD2        TPKSLATEAMPHAVD---------------------------------------------- 346
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Pt-NoxD         ------------------------------------------------------------
An-Fre1         ------------------------------------------------------------
Sc-Fre1         ------------------------------------------------------------


Dp-Nox5A        STSESPSGAQSVAHTGYRYMRHPPEIINLPVPVEDPRNDDLPHAMWKKFNRKKGPRDTFG 443
Dp-Nox5B        KNSDQLNGAPDDPSSSITFNRAQSPALNR-DPYDEGILRDKQHHRYPHHHQQPRAMSILV 448
Hs-Nox5         ------------------------------------------------------------
Lg-Nox5A        ------------------------------------------------------------
Lg-Nox5B        ------------------------------------------------------------
Dd-NoxC         ------------------------------------------------------------
Mg-NoxA         ------------------------------------------------------------
Fg-NoxA         ------------------------------------------------------------
Cc-NoxA         ------------------------------------------------------------
Lb-NoxA         ------------------------------------------------------------
fPp-NoxA        ------------------------------------------------------------
Pg-NoxA         ------------------------------------------------------------
Bd-NoxA         ------------------------------------------------------------
```


Mg-NoxB
Fg-NoxB
Cc-NoxB
Lb-NoxB
fPp-NoxB
Pg-NoxB
Bd-NoxB
Hs-Nox2
Hs-Nox3
Hs-Nox1
Lg-Nox2
Nv-Nox2A
Nv-Nox2B
Ci-Nox2
Sp-Nox2A
Sp-Nox2B
Mb-Nox2
Hs-Nox4
Nv-Nox4
Lg-Nox4
Dd-NoxA
Dd-NoxB
Ng-NoxA
Os-rboh-C
Os-rboh-G
At-rboh-D
Os-rboh-A
Os-rboh-B
Os-rboh-D
Os-rboh-H
Os-rboh-E
Os-rboh-F
mPp-rboh-A
mPp-rboh-C
mPp-rboh-B
mPp-rboh-D
Ps-rboh-B
Ps-rboh-C
Ps-rboh-A
Hs-Duox1
Hs-Duox2
Lg-Duox1
Lg-Duox2
Lg-Duox3
Dp-Duox
Cb-Duox
Mg-NoxC
Fg-NoxC
Cm-NoxD2
Cm-NoxD1
Pt-NoxD
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PIEETPGKSKTGSEVRKRATPRASYAPESMRKKPAQFTSRDENRSAHQPNSEKP----HS 504
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----------VDPMGMYEV 367
Fg-NoxA
----------VDPMGMYEV 344
Cc-NoxA
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fPp-NoxA         ---------------------------------------------DDSVYGTRGDFVEL 355
Pg-NoxA          ------------------------------------------------FSVEDCGEFHDI 345
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Mg-NoxB          ----------------------------------------------------GVNGENPD 333
Fg-NoxB          ----------------------------------------------------GLTGREAE 336
Cc-NoxB          ----------------------------------------------------GAVAKPAA 339
Lb-NoxB          ----------------------------------------------------GGKVVGTN 352
fPp-NoxB         ----------------------------------------------------GGKLIGTN 341
Pg-NoxB          ------------------------------------------------------AGRPTV 332
Bd-NoxB          -------------------------------------------------------------S 298
Hs-Nox2          ------------------------------------------------------------
Hs-Nox3          ------------------------------------------------------------
Hs-Nox1          ------------------------------------------------------------
Lg-Nox2          ------------------------------------------------------------
Nv-Nox2A         ------------------------------------------------------------
Nv-Nox2B         ------------------------------------------------------------
Ci-Nox2          ------------------------------------------------------------
Sp-Nox2A         ------------------------------------------------------------
Sp-Nox2B         ------------------------------------------------------------
Mb-Nox2          ------------------------------------------------------------
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Nv-Nox4          ------------------------------------------------------------
Lg-Nox4          ------------------------------------------------------------
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Os-rboh-G        ------------------------------------------------------------
At-rboh-D        ------------------------------------------------------------
Os-rboh-A        ------------------------------------------------------------
Os-rboh-B        ------------------------------------------------------------
Os-rboh-D        ------------------------------------------------------------
Os-rboh-H        ------------------------------------------------------------
Os-rboh-E        ------------------------------------------------------------
Os-rboh-F        ------------------------------------------------------------
mPp-rboh-A       ------------------------------------------------------------
mPp-rboh-C       ------------------------------------------------------------
mPp-rboh-B       ------------------------------------------------------------
mPp-rboh-D       ------------------------------------------------------------
Ps-rboh-B        ------------------------------------------------------------
Ps-rboh-C        ------------------------------------------------------------
Ps-rboh-A        ------------------------------------------------------------
Hs-Duox1         ------------------------------------------------------------
Hs-Duox2         ------------------------------------------------------------
Lg-Duox1         ------------------------------------------------------------
Lg-Duox2         ------------------------------------------------------------
Lg-Duox3         ------------------------------------------------------------
Dp-Duox          ------------------------------------------------------------
Cb-Duox          ------------------------------------------------------------
Mg-NoxC          ------------------------------------------------------------
Fg-NoxC          ------------------------------------------------------------
Cm-NoxD2         -------------------------------------------------------------KSS 349
Cm-NoxD1         ------------------------------------------------------------
Pt-NoxD          ------------------------------------------------------------
An-Fre1          ------------------------------------------------------------
Sc-Fre1          ------------------------------------------------------------

Dp-Nox5A         VEGVNIYLPLEITMDGPYGTPSSHIFRAQH-AVLIAAGIGVTPYASILQSIMHRYYASLQ 562
Dp-Nox5B         VEGVHIYYPLEIAIDGPYGTPSSHIFRAQH-AVLVAAGIGVTPFASILQSIMHRYYVSRQ 563
Hs-Nox5          ---------IKCYIDGPYGTPTRRIFASEH-AVLIGAGIGITPFASILQSIMYRHQKRKH 381
Lg-Nox5A         ---------VKIYIDGPFGTSAREIFDTEH-AVLVGSGIGVTPFASILQSILHRFQSATR 408
Lg-Nox5B         ---------AEVYLDGPYGTSTREIFQTEH-AVLIGSGIGITPYASILQSIIYRFNAITR 408
```

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Dd-NoxC          ------LKPFRINIDGPFGSSSQYALKQKQ-VILVGAGIGVSPMASLLKDISLKKQRLQL 410
Mg-NoxA          ALQN-GQQMPMLRIDGPYGAPAEDVFENEI-AVLIGTGIGVTPWASILKNIWHLRNGPNP 425
Fg-NoxA          ALQN-GDQMPALRIDGPYGAPAEDVFENEI-AVLIGTGIGVTPWAAILKNIWHLRNSPNP 402
Cc-NoxA          DPATMSITLPQVRIDGPYGAPAEDVFNNEV-AVLVGAGIGVTPFASILKHIWYRQKKGKL 412
Lb-NoxA          DPAGSSIALPSVRIDGPYGAPAEDVFGAEV-AILIGAGIGVTPFASILKHIWYRQKKGKL 399
fPp-NoxA         DSG--ARPLPTVRIDGPYGAPAEDVFNVEV-AVLVGAGIGVTPFASILKHIWYRQKKGNL 412
Pg-NoxA          TTIR-SRDLPLVRIDGPYGSPAQDVFKCEV-AILIGAGIGVTPFSSILKNIYYMQAQGKL 403
Bd-NoxA          ------MDLPEIRIDGPYGAPAEDLYNYKV-AVLVGAGIGVTPAASLLKSVWYRYYR-KA 366
Mg-NoxB          VDPALKRVLPRVYVDGPFGSASEDVFKYEI-AVLCGAGIGVTPFASILKSIWYRMNYPQK 392
Fg-NoxB          IDPAIRRVLPRVYVDGPFGSASEDVFKYEV-SVLVGAGIGVTPFASILKSIWYRMNYPQK 395
Cc-NoxB          VPPPINRPLPRVMVDGPFGSASEDFLKYET-VLLVGGGIGVTPFASILKHIWYRMNNLTD 398
Lb-NoxB          VNPSVNRLLPRVMVDGPFGSASEDFLKYET-VLLVGAGIGVTPFASILKSIWYRMNNFNN 411
fPp-NoxB         TNPPVNRVLPRVMVDGPFGSASEDFLNYET-VLLVGAGIGVTPFASILKSIWYRMNNLNN 400
Pg-NoxB          LPPATNRVLPRVMVDGPFGSASEDVFKFEV-VMLVGGGIGVTPFASVLKSIWYKLNFPSA 391
Bd-NoxB          DNMPAPDTLPYVMVDGPYGSASEDVFDYEA-AVLVGAGIGVTPFASILKTIWFRINNPTR 357
Hs-Nox2          --FQDAWKLPKIAVDGPFGTASEDVFSYEV-VMLVGAGIGVTPFASILKSVWYKYCN--N 430
Hs-Nox3          --LQEPWSLPRLAVDGPFGTALTDVFHYPV-CVCVAAGIGVTPFAALLKSIWYKCSE--A 428
Hs-Nox1          --------PIPRIEVDGPFGTASEDVFQYEV-AVLVGAGIGVTPFASILKSIWYKFQC--A 424
Lg-Nox2          --FQEAWKMPKIAIDGPYGTSTEDCFRFDV-AVLIGTGIGVTPFASVLRHVWKKYST--R 423
Nv-Nox2A         --LQSVNEMPRLALDGPFGTASIDVFKYGV-GMYIGAGIGVTPFASVLKSIWYRYNE--N 422
Nv-Nox2B         --QIAIDQMPRIAVDGPYGTASTDVFRYEV-VMCIGAGIGVTPFASILKSIWYRHNQ--D 416
Ci-Nox2          --VQPSWKMPRLAIDGPFGTASEDVFNYPV-AICVGSGIGVTPFASLLKSVWYKNLN--P 443
Sp-Nox2A         --QQSQDELARVAVDGPFGTASIDIFKYQV-AICVGAGIGVTPFASILKSIWLKSVN--N 441
Sp-Nox2B         --PLSITQLPRVQVDGPFGTSCTDIFDYDV-VMCVSAGIGVTPYASTLKSIWISSRQ--N 415
Mb-Nox2          --PKVGSELPYICIDGPFGTASEDMYHYPV-AMLIGAGIGVTPFASLLKELYFRKSNPSA 464
Hs-Nox4          LPFIQSRNYPKLYIDGPFGSPFEESLNYEV-SLCVAGGIGVTPFASILN----TLLDDWK 450
Nv-Nox4          LVAAPSVRSAVLSVDGPYGSPCMDVEEYRV-SMCIATGIGVTPFAALITRIRSQIIHAQR 444
Lg-Nox4          LHYEDIVRSPELKVDGPYSSPLCEMNQSKL-AVCIAGGIGVTPFISFLLKLR------YK 372
Dd-NoxA          LKSPD-GKP-ILRIDGPFGAASEEVFKYKQ-VILVGAGIGVTPFASILKHIKYQMARTYN 384
Dd-NoxB          KSTQNRGKRRILKIDGPFGAPAENFFKYRN-LVLIGAGIGVTPFSSILRHLKNQNDKQTN 383
Ng-NoxA          PTTPD-GTDYLIRVDGPFGTCAEYCFDFEY-VMLIAAGIGVTPYSSLLKHFKFRLDAAAS 371
Os-rboh-C        ----EKARFPKLLVDGPYGAPAQDYREYDV-LLLIGLGIGATPLISIVKDVLN---HIQG 410
Os-rboh-G        ----HHSRFPKLLIDGPYGAPAQDYWKYDV-LLLIGLGIGATPLISIVKDVLN---HIYD 370
At-rboh-D        ----GNLPFPKVLIDGPYGAPAQDYKKYDV-VLLVGLGIGATPMISILKDIIN---NMKG 403
Os-rboh-A        -----KKILPKLLIDGPYGSPAQDYSKYDV-LLLVGLGIGATPFISILKDLLNNIIKMEE 407
Os-rboh-B        -----KKALPKLLIDGPYGSPAQDYSKYDV-LLLVGLGIGATPFISILKDLINSIIKMEE 407
Os-rboh-D        -----PRSLPRLLVDGPYGAPAQDFRNYDV-LLLVGLGIGATPFISILRDLLNN-IKLAE 423
Os-rboh-H        -----QKSPPRLLVDGPYGAPAQDFRNYDV-LLLVGLGIGATPFISILRDLLNN-IKLAD 467
Os-rboh-E        ----EDTRFPKVLIDGPYGAPAQNYKKYDI-LLLIGLGIGATPFISILKDLLN---NIKS 413
Os-rboh-F        ----EETCFPKVFIDGPFGAPAQNYKKYDI-LLLIGLGIGATPFISILKDLLN---NIKS 413
mPp-rboh-A       ----CCHRFPKLYIDGPYGAPAQDYLKYDV-LLLVGLGIGATPFISILKDMLH---HTRN 415
mPp-rboh-C       -----AARFPKLYIDGPYGAPAQDYLNYDV-LLLVGLGIGATPFISILKDLLH---HTIN 407
mPp-rboh-B       -----AARFPKLFVDGPYGAPAQDYLKYDV-LLLVGLGIGATPFISILKDMLH---HTR- 406
mPp-rboh-D       -----APRFPKLYIDGPYGAPAQDYLKYDV-LLLVGLGIGATPFISILKDMLH---HSRN 416
Ps-rboh-B        --------YPDIHLDGPVGAPTQDYHRYKT-VICVGGGIGVTPFASILKDVVHLWEANRC 381
Ps-rboh-C        --------YPDVYLDGPVGAPTQDYHRYKT-VICIGGGIGVTPFASILKDVVHLWEDNRC 368
Ps-rboh-A        -------PYPTVFLDGPIGAPAQDYSRYRE-VVLIGAGIGVTPFASILRSIMHQWESYRC 384
Hs-Duox1         ------ARYPKLYLDGPFGEGHQEWHKFEV-SVLVGGGIGVTPFASILKDLVFKSSVS-- 373
Hs-Duox2         ------AGYPKLYLDGPFGEGHQEWHKFEV-SVLVGGGIGVTPFASILKDLVFKSSLG-- 373
Lg-Duox1         ------KGFPKLYLDGPFGEGHQDWYRYPV-AVLVGGGIGVTPFASILKDLVQKSKMK-- 381
Lg-Duox2         ------KPLPLLYVDGPFGEGHQDWFTFDV-AVLVGGGIGVTPFASILKDIAFKSKAG-- 380
Lg-Duox3         ------NPYPKLFLDGPYGAGQQDWYQYEV-SLLVGAGIGVTPYASILKDFVHMTSIKNT 382
Dp-Duox          ------DMDPKIQLDGPFGGGNQDWYKFEV-AVMVGGGIGVTPYASILNDLVFGTSTNRY 383
Cb-Duox          ------SPYPLIHLKGPYGDGNQEWMNYEV-AIMVGGGIGVTPYASTLNDLVQLTASDSF 384
Mg-NoxC          -----QEVDIEIGINGPFGAPAQRFYDFNH-TILVGAGIGLTPFSGILADLQAKEDRLHG 373
Fg-NoxC          -----GESEIEVGINGPFGAPAQRFYDFNH-SIIIGAGIGVTPFSGILADLQYNDDLDHG 370
Cm-NoxD2         ITTCLPINRRWILLSGPYGAPAQSHQNFAH-QLLIGTGVGASPMFSIVQELCG-RATPCD 407
Cm-NoxD1         ------IEAYRVLLAGPYGAPAQSHLHFPY-QLLIGSGVGATPMVSILREICSARAPAKL 389
Pt-NoxD          -----APLSMTVNLRGPFGAPAQNYLNYRH-LVVIGSGIGVTPLLSVWAYLVRATKGLVK 381
An-Fre1          ------TIQPLLLLEGPYGHTAP-LHTFDT-VLLIAGGTGIAATLPYILDYAARLDSQAT 619
Sc-Fre1          ---------CKIFLEGPYGVTVPHIAKLKRNLVGVAAGLGVAAIYPHFVECLRLPSTDQL 558
                                **                 * *

Dp-Nox5A         KCPNCRYSWANQ---------------------------------------------- 574
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Dp-Nox5B        SCPRCHHSWVSQ---------------------------------------------- 575
Hs-Nox5         TCPSCQHSWIEG---------------------------------------------- 393
Lg-Nox5A        TCPKCQHSFYD----------------------------------------------- 419
Lg-Nox5B        TCPKCHHCFNEP---------------------------------------------- 420
Dd-NoxC         LNQGDQIALEQSKN-------------------------------------------- 424
Mg-NoxA         PTR------------------------------------------------------ 428
Fg-NoxA         PRR------------------------------------------------------ 405
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Pg-NoxA         GL------------------------------------------------------- 405
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Mg-NoxB         K-------------------------------------------------------- 393
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Cc-NoxB         AK------------------------------------------------------- 400
Lb-NoxB         SK------------------------------------------------------- 413
fPp-NoxB        SK------------------------------------------------------- 402
Pg-NoxB         SKQGS---------------------------------------------------- 396
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Os-rboh-C       E----GSVGTTEPE------------------------------------------- 420
Os-rboh-G       DPESAASPHTTNGG------------------------------------------- 384
At-rboh-D       P-----DRDSDIEN------------------------------------------- 412
Os-rboh-A       EEDASTDLYPPMGR------------------------------------------- 421
Os-rboh-B       EEEASGDLYPPIGR------------------------------------------- 421
Os-rboh-D       ELMDLAMETSRSED------------------------------------------- 437
Os-rboh-H       ELMDLAMETSRSDD------------------------------------------- 481
Os-rboh-E       N----EEVESIHGS------------------------------------------- 423
Os-rboh-F       N----GDVQSTHDA------------------------------------------- 423
mPp-rboh-A      DSSGHSYPVLT---------------------------------------------- 426
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mPp-rboh-B      ---YDLS-------------------------------------------------- 410
mPp-rboh-D      DSVSDLSSSPDLN-------------------------------------------- 429
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Hs-Duox1        CQVFC---------------------------------------------------- 378
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Lg-Duox1        VKFPC---------------------------------------------------- 386
Lg-Duox2        IKINC---------------------------------------------------- 385
Lg-Duox3        YKVKC---------------------------------------------------- 387
Dp-Duox         SGVAC---------------------------------------------------- 388
Cb-Duox         HKVRC---------------------------------------------------- 389
Mg-NoxC         GPTQKLQEQAEKGGDVRGSTSADAPDGRRIGTSREAEAMPQRTDVDMQAPTSGDQSNTTL 433
Fg-NoxC         GPNHEVDHHR------HDSEATAIPQAARRSDSSSSDEATTSDNVPETPTRQGSVGPDLI 424
Cm-NoxD2        N-------------------------------------------------------- 408
Cm-NoxD1        N-------------------------------------------------------- 390
Pt-NoxD         KVYFVFYG------------------------------------------------- 389
An-Fre1         KTT------------------------------------------------------ 622
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Sc-Fre1         QHK------------------------------------------------------- 561


Dp-Nox5A        --------------------MPDSIMNLKKVDFFWINRDQRSFEWFVHVLSQLEMEQAEM 614
Dp-Nox5B        --------------------MPDSIMNLKKVDFFWINREQRSFEWFVEVLSQLEVEQAEM 615
Hs-Nox5         --------------------VQDN-MKLHKVDFIWINRDQRSFEWFVSLLTKLEMDQAEE 432
Lg-Nox5A        --------------------QRGPGMKIKRVDFIWINRDQKNFEWFVRMLTDIEVEQA-N 458
Lg-Nox5B        --------------------LAGSMMKLKKVDFVWINRDQRAFEWFTSLLTQLELEQVKN 460
Dd-NoxC         -----EIT------------TKFGLGNLEKVHFFWLNRDQHSFQWFEDLLIDISTNGN-- 465
Mg-NoxA         ---------------------------LRRVEFLWVCKDTSSFEWFQTLLSSLEQQSTDA 461
Fg-NoxA         ---------------------------LRRVEFIWVCKDTGSFEWFQTLLSSLEEQSNEA 438
Cc-NoxA         ---------------------------LRRVEFFWVCRDAPSFGWFQSLLQEVEAAQAD- 446
Lb-NoxA         ---------------------------LRRVEFFWVCRDAPSFGWFQSLLQEVEAAQADR 434
fPp-NoxA        ---------------------------LKRVEFFWVCRDAPSFGWFQTLLQEVEEAQVD- 446
Pg-NoxA         ---------------------------LRKVQFIWINKEITSFSWFKTLLKNLEDIQHD- 437
Bd-NoxA         ---------------------------LKKVYFVWINRDKEAFGWFQSLLASLEETIPR- 401
Mg-NoxB         -------------------------TRLAKVYFFWICRDFGSFEWFRSLLLAIE----AQ 424
Fg-NoxB         -------------------------TRLSKVYFFWICRDFDSFEWFRSLLLAVE----AQ 427
Cc-NoxB         ------------------------PTRLSKVYFTWVIKDFGTAEWFHSLLHAIE----EE 432
Lb-NoxB         ------------------------PTRLSKVYFTWVIRDFGVAEWFHSLLHAIE----EQ 445
fPp-NoxB        ------------------------PTRLSKVYFTWVIRDFGSAEWFHSLLQAIE----EQ 434
Pg-NoxB         ------------------------PIRLQKVYFFWVCRDFDSFEWFKSLLSAIE----EQ 428
Bd-NoxB         ------------------------VPLKKVYFFWICRDKDAFEWFQDLLSTIE----DE 389
Hs-Nox2         ------------------------LKLKKIYFYWLCRDTHAFEWFADLLQLLESQMQER 468
Hs-Nox3         ------------------------LKLSKVYFYWICRDARAFEWFADLLLSLETRMSEQ 466
Hs-Nox1         ------------------------LKTKKIYFYWICRETGAFSWFNNLLTSLEQEMEEL 462
Lg-Nox2         ------------------------LQLKYVHFYWVCPSTSSFEWLQELLNSLESQMAEM 461
Nv-Nox2A        ------------------------LNIKKVYFFWICNDTNAFEWFTDLLKILEEKMIDS 460
Nv-Nox2B        ------------------------LRVKKVYFYWICRDTFAFEWFSDLLKHIEIQMDEM 454
Ci-Nox2         ------------------------MVLKKVYFFWICPETHAFEWFGDLLKYLERQLTEI 481
Sp-Nox2A        ------------------------LKLKKVYFFWICPDTNAFEWFSTLLDSIDTHFTEQ 479
Sp-Nox2B        ------------------------LHLKRMYFYWICRDTHAFEWFVELLSSLELILRQI 453
Mb-Nox2         ------------------------FKTQKVYFYWMCPGFDAWGWFASLLIDLEDKLEQL 502
Hs-Nox4         ---------------------------LRRLYFIWVCRDIQSFRWFADLLCMLHNKFWQE 486
Nv-Nox4         ---------------------------PHRLYFVWICREVGALQWFADLIHETSRQLWEL 480
Lg-Nox4         ---------------------------LKKLYFIWIVRDLSHLAWFMEDILLSH-QLLER 407
Dd-NoxA         ---------------------------LIDKVHFYWICRDRNSFEWFSGLIGELEMEN-H- 419
Dd-NoxB         ------------------------HLKINKIYFIWISRQKNSFQWFTDILAELENDERI- 422
Ng-NoxA         ------------------------PLKIRRASFYWINRDEGSWEWFSDILNQLETEN--- 408
Os-rboh-C       -----SS-----------SKAKKKPFMTKRAYFYWVTREEGSFEWFRGVMNEVSEKDK-- 462
Os-rboh-G       -----GA-----------AAAARRAFMTKRVYFYWCTREEGSFEWFRGVMNEVADRDAG- 427
At-rboh-D       -----NN-----------SNNNSKGFKTRKAYFYWVTREQGSFEWFKGIMDEISELDE-- 454
Os-rboh-A       -----NKPHVDLGTLMTITSRPKKILKTTNAYFYWVTREQGSFDWFKGVMNEIADLDQ-- 474
Os-rboh-B       -----NKAHVDLDTLMRITSKPKRVLKTTNAYFYWVTREQGSFDWFKGVMNEIAELDQ-- 474
Os-rboh-D       -----SAN---SFSVSTASSNKKRAYRTSRAHFYWVTREPLSFEWFKGVMNEVAEMDK-- 487
Os-rboh-H       -----SAN---SFSVSTASSNKRRAYRTSRAHFYWVTREPGSFEWFKGVMNEVAEMDK-- 531
Os-rboh-E       -----EIG----------SFKNNGPGRAYFYWVTREQGSFEWFKGVMNDVAESDH-- 463
Os-rboh-F       -----ELGC----------TFKSNGPGRAYFYWVTREQGSFEWFKGVMNDVAESDH-- 464
mPp-rboh-A      ----------------------TKAKRKPKAYFYWITREQGSFDWFRGVMREVEEIDN-- 462
mPp-rboh-C      -----RPM------ESPRTRSKKKAKRNPKAYFYWMTREQGSFDWFRGVMREVEEIDH-- 468
mPp-rboh-B      ------------------DPVMKPCDRES-SYFYWVTREQGSFDWFRGIMREVEEIDN-- 449
mPp-rboh-D      --------------PTGSPPPKKKAKRDPKAYFYWVTREQGSFDWFRGIMREVEEIDN-- 473
Ps-rboh-B       ------------------HVRHPGSFKIQKLYFHWVTRGQESLSWFEETMNQIAEMDR-- 425
Ps-rboh-C       ------------------HVRHPSSFQIQKLYFHWVTRGQESLSWFEGTMKQIAQMDR-- 412
Ps-rboh-A       ------------------HVRFPPSFQLRKIYFYWVMREQEALTWFTNTMNQLSQMDA-- 428
Hs-Duox1        ---------------------------KKIYFIWVTRTQRQFEWLADIIREVEENDHQ- 409
Hs-Duox2        ---------------------------KKIYFIWVTRTQRQFEWLADIIQEVEENDHQ- 409
Lg-Duox1        ----------------------------QKVYFLWVTRTQKSFEWMTDIIREVELGDVN- 417
Lg-Duox2        ---------------------------KKVYFVWITRSQKHFEWLIDIIRDVEEQDVL- 416
Lg-Duox3        ----------------------------QKLYFIWVTGSQRHFEWLIDILREVEEIDER- 418
Dp-Duox         ----------------------------KKVYFLWTCPSHRHFEWFIDVLRDIESKDVT- 419
Cb-Duox         ----------------------------QKVYFLWVCPSHKNYEWFVDVLKNVENQDRR- 420
Mg-NoxC         QETADADSDSASSISRPSSSFSSFASDYRRVDFHWMVRDRNHLLWISELLNTVSRSQAWH 493
Fg-NoxC         NKEKQPQADKAG----------SFAEDYRRVDFHWMVRERNYLLWLSDLLNDVSMSQDWH 474
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Cm-NoxD2        ---------------------------IRTVTFVWVVRYVEDLWFLEKLYELASQQDASD 441
Cm-NoxD1        ---------------------------VFSLTFVWVVREYADLWGIQGLFDLA--QTWTP 421
Pt-NoxD         ----------------------AFIALHSVRIFHIFYATARPPHTEEPTRGVDAIHSVT 426
An-Fre1         ----------------------------RLHLIWSARQRDVFTTVLSDELSHVLQCEG- 652
Sc-Fre1         --------------------------------FYWIVNDLSHLKWFENELQWLKEKSCEV 589


Dp-Nox5A        DSALG----RFLDLHMYITSALKKTDLKAVGLQMALDLLYAE------------------- 652
Dp-Nox5B        GSALG----RFLDLHMYITSALKKTDLKAVGLQMALDLIHAK------------------- 653
Hs-Nox5         A-QYG----RFLELHMYMTSALGKNDMKAIGLQMALDLLANK------------------- 469
Lg-Nox5A        YDKFG----RIIHMHMYMTSALSKTDMKGLGLQMALELLHTK------------------- 496
Lg-Nox5B        GSHLD----KILNLHMYMTAAVQKADMKGIGLQVALDLIHEK------------------- 498
Dd-NoxC         --SNL----PKISINTFNTRVFPKNDVRVFMLWNGLDKLFKA------------------- 501
Mg-NoxA         AGLPGGNGVEFLKIHSYLTQKLDMDTTQNIVLNSVGAAL---------------------- 500
Fg-NoxA         ARMPGSTGVEFLKIHTYLTQKLDIDTAQNIVLNSVGSQM---------------------- 477
Cc-NoxA         --------PNFLRINIYLTQKINEDMLWNIAVNDAGADY---------------------- 477
Lb-NoxA         E--LHVLAANFLRINVYLTQKISEDMLWNIAVNDAGAEY---------------------- 471
fPp-NoxA        --------PNFLRINIYLTQKIGEDMLWNIALNDAGAEY---------------------- 477
Pg-NoxA         --------YSFLRMDMYLTGSMDEDTISNVVLNTGAHKF---------------------- 468
Bd-NoxA         ---------SFLEIHTYLTGNLAVDDIQNILLN-SDMDV---------------------- 430
Mg-NoxB         DVD------NRIEIHTYLTAKIKADDATNIMINDANAD------------------------ 456
Fg-NoxB         DLD------HRIEIHTYLTARIKADDATNIMINDANAD------------------------ 459
Cc-NoxB         DTQ------NRIEINIYLTAKLKEDEVNNIIVQDVGAE------------------------ 464
Lb-NoxB         DTQ------GRIEINIYLTAKIKEDDMNNIILQDVGAE------------------------ 477
fPp-NoxB        DTQ------NRIEINIYLTAKIKEDDMNNIIVQDVGAE------------------------ 466
Pg-NoxB         DVD------RRVELHTYITQKLKDDDINNIIVSDVGGN------------------------ 460
Bd-NoxB         NIS------NFLEIHTYLTQKLKISEVKNIVINDGEDG------------------------ 421
Hs-Nox2         NNA------GFLSYNIYLT-GWDESQANHFAVHHDEE------------------------ 498
Hs-Nox3         GKT------HFLSYHIFLT-GWDENQALHIALHWDEN------------------------ 496
Hs-Nox1         GKV------GFLNYRLFLT-GWDSNIVGHAALNFDKA------------------------ 492
Lg-Nox2         GSA------NFLSHNIYLTSGWDSNQAKNIVLHNDEE------------------------ 492
Nv-Nox2A        GNA------GFLEYNIYLTRGWGANMARDIYLREDEV------------------------ 491
Nv-Nox2B        NMP------GFIQINIFLT-GWDKKLANQVVMERSAD------------------------ 484
Ci-Nox2         GRQ------DLIEYHIYLTRGWDHKQAKAIYAHEEDT------------------------ 512
Sp-Nox2A        GKP------DFLKYYIYLSRGWNNTQAKNIYLQEEQE------------------------ 510
Sp-Nox2B        DKE------HLLSYSIYLTRGWDYTQAKNIFMQEDRE------------------------ 484
Mb-Nox2         GVP------DFLEIRVFTTRGWSQDDAAKIMLQEDESGDS---------------------- 536
Hs-Nox4         NRP------DYVNIQLYLSQTD-GIQKIIG--EKYHALN---------------------- 516
Nv-Nox4         NRP------DFLTCLFYITSKG-QKEKICINHTQSSWFD---------------------- 512
Lg-Nox4         KFP------NSLEVQFYVTNSDSTTEQRHFSEDSLNFIQ---------------------- 440
Dd-NoxA         --------NNFLEIHPYLTGALSAQEIRDVMYGD---------------------------- 445
Dd-NoxB         --------DSILEIHIFLTGALELDDYAKIKN------------------------------ 446
Ng-NoxA         --------PEFFDIHTYMTGMLKADDVKKIMFTSSEYQTQSNTAGNVQQSGKVDFMVRAL 460
Os-rboh-C       --------DGVIELHNHCSSVYQEGDARSALIVMLQELQHAKK------------------ 497
Os-rboh-G       --------RELIELHNHCTSVYEEGDARSALVTMLQALHHAKN------------------ 462
At-rboh-D       --------EGIIELHNYCTSVYEEGDARVALIAMLQSLQHAKN------------------ 489
Os-rboh-A       --------RNIIEMHNYLTSVYEEGDARSALITMLQALNHAKN------------------ 509
Os-rboh-B       --------RNIIEMHNYLTSVYEEGDARSALITMLQALNHAKN------------------ 509
Os-rboh-D       --------KGVIELHNYLTSVYEERDARTTLLSMVQALNHAKH------------------ 522
Os-rboh-H       --------KGVIELHNYLTSVYEERDARSTLLSMVQALNHAKH------------------ 566
Os-rboh-E       --------NNIIEMHNYLTSVYEEGDARSALIAMVQSLQHAKN------------------ 498
Os-rboh-F       --------DNVIEMHNYLTSVYEEGDARSALIAMVQSLQHAKN------------------ 499
mPp-rboh-A      --------KRSIEMHNYLTSVYEEGDARSTLVMMLQALHHAKN------------------ 497
mPp-rboh-C      --------KGSIEMHNYLTSVYEEGDARSTLVIMLQALHHAKN------------------ 503
mPp-rboh-B      --------KESIEMHNYLTSVYEEGDARSTLVTMLQSLYHAKN------------------ 484
mPp-rboh-D      --------KELIEMHNYLTSVYEEGDARSTLVTMLQSLHHAKN------------------ 508
Ps-rboh-B       --------DNVIETHQYLST--LKGSENTSQLKMFQEFVHEQT------------------ 458
Ps-rboh-C       --------DNVIETHQYLSTVVLGGEENTSQLKMFQEFVHEQT------------------ 447
Ps-rboh-A       --------DNRLEIHNFFSS--VKNEEVIAPLQALQNFIHDTE------------------ 461
Hs-Duox1        ---------DLVSVHIYITQLAEKFDLRTTMLYICERHFQKVLN------------------ 444
Hs-Duox2        ---------DLVSVHIYVTQLAEKFDLRTTMLYICERHFQKVLN------------------ 444
Lg-Duox1        ---------NLVSVHIFITQFQQKFDLRTTMLYICERHFQKVAG------------------ 452
Lg-Duox2        ---------EIVNVHIFITQFTQKYDLRTTMLYICERNFQKVEN------------------ 451
Lg-Duox3        ---------GMVSIDIFITQFFQNFDLRTAMLYVFEEHFQKMTGG---------------- 454
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Dp-Duox          ---------NVLEMHIFITQFFHKFDLRTTMLYICENHFQRISK---------------- 454
Cb-Duox          ---------GILETHIFVTQLFHKFDLRTTMLYICEKHFRATNAG--------------- 456
Mg-NoxC          HRHDAP-GEYHLDIRMQTHVTQKRKNVSTHVYRWLLEQHRTPEHP--------------- 537
Fg-NoxC          REHED---KPHLDIRINTHVTAKQKKISTHVYRWLLEMHRTDEHP--------------- 516
Cm-NoxD2         PCR------PRLRIHVHITRLGHDDADPVSSRLPANCGEILQFHCGR------------- 482
Cm-NoxD1         DLI------PRVRVHIFLTR-GEIPASILEAGQSTKS--ILQFHQGR------------- 459
Pt-NoxD          GIWVAKKYEDMSFAAPSLVRTLPGLSKVFSLRLFATRDKEED------------------ 468
An-Fre1          -----------VTISFFCTGGDPMSPIEIEAIDKEVAIN--------------------- 680
Sc-Fre1          S-----------VIYTGSSVEDTNSDESTKGFDDKEESE--------------------- 617


Dp-Nox5A         ------------------------------------------------EKRDLVTG--LK 662
Dp-Nox5B         ------------------------------------------------DKRDLVTG--LK 663
Hs-Nox5          ------------------------------------------------EKKDSITG--LQ 479
Lg-Nox5A         ------------------------------------------------EHRDVLTG--LR 506
Lg-Nox5B         ------------------------------------------------EQRDLLTG--LR 508
Dd-NoxC          ------------------------------------------------QGLDPTTN--LP 511
Mg-NoxA          ----------------------------------------------------DPLTE--LK 507
Fg-NoxA          ----------------------------------------------------DPLTE--LQ 484
Cc-NoxA          ----------------------------------------------------DPLTL--LR 484
Lb-NoxA          ----------------------------------------------------DPLTL--LR 478
fPp-NoxA         ----------------------------------------------------DPLTL--LR 484
Pg-NoxA          ----------------------------------------------------DSLTG--LK 475
Bd-NoxA          ----------------------------------------------------DPLTE--LQ 437
Mg-NoxB          ------------------------------------------------KDAITG--LR 464
Fg-NoxB          ------------------------------------------------KDTITG--LR 467
Cc-NoxB          ------------------------------------------------KDAITS--LR 472
Lb-NoxB          ------------------------------------------------KDAITS--LR 485
fPp-NoxB         ------------------------------------------------KDAITS--LR 474
Pg-NoxB          ------------------------------------------------RDAITQ--LR 468
Bd-NoxB          ------------------------------------------------RDAITG--LK 429
Hs-Nox2          ------------------------------------------------KDVITG--LK 506
Hs-Nox3          ------------------------------------------------TDVITG--LK 504
Hs-Nox1          ------------------------------------------------TDIVTG--LK 500
Lg-Nox2          ------------------------------------------------RDAVTG--LQ 500
Nv-Nox2A         ------------------------------------------------EDPITR--LR 499
Nv-Nox2B         ------------------------------------------------RDPITG--LF 492
Ci-Nox2          ------------------------------------------------HDVITG--LE 520
Sp-Nox2A         ------------------------------------------------IDAITG--LR 518
Sp-Nox2B         ------------------------------------------------IDAVTG--LR 492
Mb-Nox2          ------------------------------------------------IVRDAETGRALR 548
Hs-Nox4          ------------------------------------------------------------
Nv-Nox4          ------------------------------------------------------------
Lg-Nox4          ------------------------------------------------------------
Dd-NoxA          ------------------------------------------------EEKDLITGFT-- 455
Dd-NoxB          ------------------------------------------------AQKCHITNLH-- 456
Ng-NoxA          HKYDAQSSDEISLDRNDIVVVSEQDESGWWTGTNTTTKQTGLFPGNFVVKVDHVTKMADS 520
Os-rboh-C        ------------------------------------------------GVDILS--GTS 506
Os-rboh-G        ------------------------------------------------GVDVVS--GTR 471
At-rboh-D        ------------------------------------------------GVDVVS--GTR 498
Os-rboh-A        ------------------------------------------------GVDIVS--GTK 518
Os-rboh-B        ------------------------------------------------GVDIVS--GTK 518
Os-rboh-D        ------------------------------------------------GVDIVS--GTR 531
Os-rboh-H        ------------------------------------------------GVDIVS--GTR 575
Os-rboh-E        ------------------------------------------------GVDIVS--GSR 507
Os-rboh-F        ------------------------------------------------GVDIVS--GSK 508
mPp-rboh-A       ------------------------------------------------GVDLVS--GTR 506
mPp-rboh-C       ------------------------------------------------GVDLVS--GTR 512
mPp-rboh-B       ------------------------------------------------GVDLVS--GTR 493
mPp-rboh-D       ------------------------------------------------GVDVVS--GTR 517
Ps-rboh-B        ------------------------------------------------GKDFVSGLSTK 469
Ps-rboh-C        ------------------------------------------------GKDFVSGMDTK 458
Ps-rboh-A        ------------------------------------------------GQDIISGLQTR 472
Hs-Duox1         ------------------------------------------------RSLFTG--LR 452
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Hs-Duox2        ------------------------------------------------RSLFTG--LR 452
Lg-Duox1        ------------------------------------------------QSLFTG--LR 460
Lg-Duox2        ------------------------------------------------KSLFTG--LR 459
Lg-Duox3        ------------------------------------------------KSVYTG--LK 462
Dp-Duox         ------------------------------------------------RSMFTG--LK 462
Cb-Duox         ------------------------------------------------MSMFTG--LH 464
Mg-NoxC         ------------------------------------------------ASPITG--LI 545
Fg-NoxC         ------------------------------------------------ASPLTG--LL 524
Cm-NoxD2        ----------------------------------PDFGEYVAELVNEDHDTTTP--LA 504
Cm-NoxD1        ----------------------------------PRFETFIEDLL-----DLRDP--YE 477
Pt-NoxD         ------------------------------------------------LVHRNPLADHGPD 481
An-Fre1         ----------------------------------------------------TTSN---- 684
Sc-Fre1         ------------------------------------------------------------IT 619


Dp-Nox5A        TRTNAGRPNWDK-VFQKLIDEDKGN-------------------------VTVFYCGPP 695
Dp-Nox5B        TRTNAGRPNWDK-IFQKLVDEDKGK-------------------------VTVFYCGPP 696
Hs-Nox5         TRTQPGRPDWSK-VFQKVAAEKKGK-------------------------VQVFFCGSP 512
Lg-Nox5A        TRTHAGRPNFDE-LFGEIKQNKAGK-------------------------VKVFLCGPQ 539
Lg-Nox5B        TRTKAGRPDFNE-LFKSIAAQKHGK-------------------------VKVFFCGAP 541
Dd-NoxC         FKTHWGRPNWDT-IFQYYSKKYSGES------------------------ISVFCCGPS 545
Mg-NoxA         SRTNFGRPNFAK-LFASMRDGIMDRT-------------YLSGLEGSMKTTVGVYFCGPS 553
Fg-NoxA         SRTNFGRPDFPR-LFTTMRNGILDRT-------------YLNGLESHIRTTVGVYFCGPS 530
Cc-NoxA         SRTMFGRPDWNS-IYSRIRQAVEGGQ-------------YIPGATAQLKTKVGTYFCGPS 530
Lb-NoxA         SRTMFGRPDWMT-IFGQMKQAIEGGQ-------------YLPGSTSQLKTKVATYFCGPG 524
fPp-NoxA        TRTMFGRPDWKN-IYARMKQAIEMGQ-------------YLPGTKEQLKTKVGTYFCGPG 530
Pg-NoxA         SQTHFGKPHWKKDVFDPIRKAIHSGD-------------WYERDISG-TTKVGCFYCGPR 521
Bd-NoxA         SRTHYGRPAWSQ-LLNGIKLNVAD---------------------VRDPQVEVGIFYCGPG 476
Mg-NoxB         APTNFGRPNWDM-IFRGIRKLHT-------------------------PAEAGVFFCGPK 498
Fg-NoxB         SPTNFGRPNWDM-IFRGIRKIHS-------------------------PAEAGVFYGGPK 501
Cc-NoxB         APTHFGRPNWDR-VFGSLCEKHP-------------------------ETDVGVFFCGPA 506
Lb-NoxB         APTHFGRPNWDR-VFGSIAEKHP-------------------------ETDVGVFFCGPA 519
fPp-NoxB        APTHYGRPNWDR-VFSSIAEKHP-------------------------ETDVGVFFCGPA 508
Pg-NoxB         SPTHYGRPNWDR-IFNSVRETHP-------------------------ATDVGVFFCGPG 502
Bd-NoxB         SRTQYGRPNWDQ-IFEALRVKHR-------------------------ATDIGVFFCGPK 463
Hs-Nox2         QKTLYGRPNWDN-EFKTIASQHP-------------------------NTRIGVFLCGPE 540
Hs-Nox3         QKTFYGRPNWNN-EFKQIAYNHP-------------------------SSSIGVFFCGPK 538
Hs-Nox1         QKTSFGRPMWDN-EFSTIATSHP-------------------------KSVVGVFLCGPR 534
Lg-Nox2         HKTHYGRPQWDK-IFSDLAVFHK-------------------------GMKLGVFFCGPK 534
Nv-Nox2A        QKTRFGRPEWNK-IFNDIGNKHP-------------------------KTDIGVFFCGPK 533
Nv-Nox2B        ARTKYGRPEWAK-IFNEVAEAHN-------------------------QTSVGVFFCGPS 526
Ci-Nox2         QKTNYGRPNWDE-IFSKTARDYP-------------------------NTHIGVFFCGVA 554
Sp-Nox2A        QKTHYGRPKWDS-NFKMIAEENPG------------------RVS-------SVFFCGPK 552
Sp-Nox2B        QKTHYGRPKWDS-NFSYIAEKNP-------------------RVSRIWNATIGVFFCGPK 532
Mb-Nox2         HKMNFGRPNWDS-EFTSVANTHA-------------------------GNNIGLFFCGPK 582
Hs-Nox4         SRLFIGRPRWKL-LFDEIAKYNR-------------------------GKTVGVFCCGPN 550
Nv-Nox4         ARLTHGRPDWFQ-IFRRVSQENP-------------------------KTCVGVFYCGAR 546
Lg-Nox4         PRTMFHRPDWAN-VLSSVSHLHC-------------------------RKTVDVFVCGPK 474
Dd-NoxA         TPTQFGRPKWDE-IFADHALRYAEK-----------------------DVGVFFCGPK 489
Dd-NoxB         SKTLFGRPNFRS-IFNQLTQLHQRE-----------------------KIGVFYCGNK 490
Ng-NoxA         SKRNFGRPNWDA-EFSDIRRYVEKNS------------------SGAKKPNVGVFVCGPG 561
Os-rboh-C       VKTHFARPNWRS-VFKKVAVSHE-------------------------NQRVGVFYCGEP 540
Os-rboh-G       VRTHFARPSWRD-VFKRVAVNHQ-------------------------GQRVGVFFCGDQ 505
At-rboh-D       VKSHFAKPNWRQ-VYKKIAVQHP-------------------------GKRIGVFYCGMP 532
Os-rboh-A       VRTHFARPNWRK-VLSKISSKHP-------------------------YAKIGVFYCGAP 552
Os-rboh-B       VRTHFARPNFKK-VLSKIASKHP-------------------------YAKIGVFYCGAP 552
Os-rboh-D       VRTHFARPNWKE-VFTRIASKHP-------------------------NSTVGVFYCGAP 565
Os-rboh-H       VRTHFARPNWKE-VFTRIASKHP-------------------------NSTVGVFYCGKP 609
Os-rboh-E       IRTHFARPNWRK-VFSDLANAHK-------------------------NSRIGVFYCGSP 541
Os-rboh-F       IRTHFARPNWRK-VFSDLANAHQ-------------------------NSRIGVFYCGSP 542
mPp-rboh-A      ARTHFARPNWKS-VFSGLTATHQ-------------------------DKRIGVFYCGPA 540
mPp-rboh-C      ARTHFARPNWKS-VFSKLAATHQ-------------------------EKRIGVFYCGPV 546
mPp-rboh-B      ARTHFARPNWKD-VFANLTFTHP-------------------------EKRIGVFYCGPA 527
mPp-rboh-D      ARTHFARPNWKN-VFTNMADTHP-------------------------NKRIGVFYCGPA 551
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Ps-rboh-B       QLTHFGRPDWDK-VFSEAKANHP-------------------------GEEVGVFYCGPH 503
Ps-rboh-C       QLTHFGRPDWER-VFSDASAKHP-------------------------GEEVGVFCCGPH 492
Ps-rboh-A       QRTRFGRPDWNA-ELSRVAQNHRRLE--------------PLEDGDGEREEIGVFFCGPK 517
Hs-Duox1        SITHFGRPPFEP-FFNSLQEVHPQV-----------------------RKIGVFSCGPP 487
Hs-Duox2        SITHFGRPPFEP-FFNSLQEVHPQV-----------------------RKIGVFSCGPP 487
Lg-Duox1        ATTHFGRPKFQD-FLLSLAHEHDGV-----------------------PQVGVFSCGPP 495
Lg-Duox2        AVTHFGRPKMED-FLHSLHHEYPEV-----------------------ERFGVFSCGPG 494
Lg-Duox3        ATTHFGRPQLNN-IMTAVNRAHPMT-----------------------RKIGVFSCGPP 497
Dp-Duox         AVNHFGRPDMTS-FLKFVQKKHSYV-----------------------SKIGVFSCGPR 497
Cb-Duox         AKNHFGRPNFKT-FFQFIQNEHKEQ-----------------------SEIGVFSCGPN 499
Mg-NoxC         NPTQFGRPDFVSILDRHYDDMRKYKAGLVARASRGGGGEDDAASVADDEVKVGVFFCGTP 605
Fg-NoxC         NPTHFGRPDFDLILDEHYEEMLKFRASKRTSTR----NKEDENYEEDEELKVGVFYCGAP 580
Cm-NoxD2        GRGKPGAPASIR-RFQRTRAFSN-------------------------KVHHGIFFCGGR 538
Cm-NoxD1        FERLFGNIIQVK-QFNRVSGFSN-------------------------DVQRGIFFCGNP 511
Pt-NoxD         HILTAGRPDWDALLAEALEKAHTSHP----------------------EGDAVGVFFCGAP 520
An-Fre1         IHFCNGRPDIRGAVENEAEIARECS-----------------------TRLGVLCSGPG 720
Sc-Fre1         VECLNKRPDLKELVRSEIKLSELEN-----------------------NNITFYSCGPA 655
                                                                          *

Dp-Nox5A        ELSKVLKKKC-------------------NKFGFNFHKEIF-------------- 717
Dp-Nox5B        QLAKELRKKC-------------------NEFDFGFSKEIF-------------- 718
Hs-Nox5         ALAKVLKGHC-------------------EKFGFRFFQENF-------------- 534
Lg-Nox5A        ALAKDLKEKS-------------------DKFGFDFTKENF-------------- 561
Lg-Nox5B        VVGKAIKEHC-------------------AKFKFGFRKENF-------------- 563
Dd-NoxC         QLSKELYEKCRYYTCL-----------KTGGTKFYFHKENF-------------- 575
Mg-NoxA         AAARDIKAACKTASVN-------------EVEFRFWKEHF-------------- 580
Fg-NoxA         AAARDIKLACKAATVP-------------DVDFRFWKEHF-------------- 557
Cc-NoxA         VLAKAIKEATIKNTNA-------------NVEFSFAKEHF-------------- 557
Lb-NoxA         ALAKAIKDATVSHTNS-------------NVEFTFAKEHF-------------- 551
fPp-NoxA        VMAKAIKEACVASTTP-------------NINFTFAKEHF-------------- 557
Pg-NoxA         PLAKTLEQECRQATTD-------------KVKFEFHKERSVDSSTFMNPLECA 561
Bd-NoxA         ALAKVIKKHADQASDN-------------RVKFVLRKEHF-------------- 503
Mg-NoxB         GLGSTLHIFCNKYS--------------EPDFAFVWGKENF-------------- 525
Fg-NoxB         GLGSSLHTYCNKYT--------------EPGFSFVWGKENF-------------- 528
Cc-NoxB         PLSKTLHSMCNKYS-------------TPKGTRFFYGKENF-------------- 534
Lb-NoxB         VLSKQLHQMSNKYS-------------DPKGTRFFFGKENF-------------- 547
fPp-NoxB        VLSKQLHISCNKYS-------------SPSGTKFFFGKENF-------------- 536
Pg-NoxB         PLGHSLHLQCNKWTGG-----------TDNDTRFFWGKENF-------------- 532
Bd-NoxB         VLSRTLHHTCNKWTEA-----------TEDGTRFYYGKENF-------------- 493
Hs-Nox2         ALAETLSKQSISNSES-----------GPRGVHFIFNKENF-------------- 570
Hs-Nox3         ALSRTLQKMCHLYSSA-----------DPRGVHFYYNKESF-------------- 568
Hs-Nox1         TLAKSLRKCCHRYSSL-----------DPRKVQFYFNKENF-------------- 564
Lg-Nox2         SLSTSLHSLCNKHS-T-----------ESVGTRFYYNKENF-------------- 563
Nv-Nox2A        ALSHTLHKMS-NAHSR-----------DGDGAKFYYNKENF-------------- 562
Nv-Nox2B        GLSHELHKMC-TQSCD-----------ETKGVRFFYNKENF-------------- 555
Ci-Nox2         ALSAKLHKMS-NKHS------------GGGVYFHYNKENF-------------- 581
Sp-Nox2A        ALSSVLHENANKFTSL-----------TPDGAKFFYNKENF-------------- 582
Sp-Nox2B        SLSTILHQSCNKHTSD-----------ESDGTRFVYYKENF-------------- 562
Mb-Nox2         VLSSQLHVTCNKFTSER----------AAEGTKFYYNKENF-------------- 613
Hs-Nox4         SLSKTLHKLSNQNNSY-------------GTRFEYNKESFS------------- 578
Nv-Nox4         GPSSMLRRCCQRMYKN-------------GASFVFNKEVSA------------- 574
Lg-Nox4         QLIYDVRKITLKCCNK-------------TNRFLLFEESF-------------- 501
Dd-NoxA         LLSKSLYKASTHYTKT-------------TTCRFHYNKENF-------------- 517
Dd-NoxB         ALGKNIIKNCNKFNGK-------------NNCHLIFHKENF-------------- 518
Ng-NoxA         GLSKQVYSYAVDKSKN-------------STVQFVFHKENF-------------- 589
Os-rboh-C       VLVPQLRQLSADFT--------------HKTNTRFDFHKENF-------------- 568
Os-rboh-G       ALTPELRRLAQDFS--------------HKTTTKFVFHKENF-------------- 533
At-rboh-D       GMIKELKNLALDFS--------------RKTTTKFDFHKENF-------------- 560
Os-rboh-A       VLAQELSKLCHEFN--------------GKCTTKFEFHKEHF-------------- 580
Os-rboh-B       VLAQELSDLCHDFN--------------GRCTSKFEFHKEHF-------------- 580
Os-rboh-D       TLAKELKTLSHEMS--------------HRTGTRFHFHKEYF-------------- 593
Os-rboh-H       TLAKELKKLSLDMS--------------HKTTTRFHFHKEYF-------------- 637
Os-rboh-E       TLTKQLKDLSKEFS--------------QTTTTRFHFHKENF-------------- 569
Os-rboh-F       TLTKMLRDLSLEFS--------------QTTTTRFHFHKENF-------------- 570
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mPp-rboh-A      ALANELENLSRSYT------------QTSSTKFSFHKENF-------------- 568
mPp-rboh-C      TLANELENLSRTYT------------QKSSTKFSFHKENF-------------- 574
mPp-rboh-B      ALVNELETLSRTYT------------KESSTKFSFHKENF-------------- 555
mPp-rboh-D      SLVNELKTLSKAFT------------KKS-TKFFFHKENF-------------- 578
Ps-rboh-B       ALEEILDNTCKRYSSS----------DPNGTIFDFHSEKFS------------ 534
Ps-rboh-C       ELEEVLANVCKKYTSS----------KADGTVFDFHSEKFA------------ 523
Ps-rboh-A       PLGNVIDEQCARLNQT----------VPD-VEFAFHSENF-------------- 546
Hs-Duox1        GMTKNVEKACQLINRQ------------DRTHFSHHYENF-------------- 515
Hs-Duox2        GMTKNVEKACQLVNRQ------------DRAHFMHHYENF-------------- 515
Lg-Duox1        PMTSNVDKACSSLNKL------------EGPTYVHHFENF-------------- 523
Lg-Duox2        PMTNSVQAACTLLNSI------------EGPTYCHHFENF-------------- 522
Lg-Duox3        GVTKGVERACVDASKS------------TKAIFEHHYENF-------------- 525
Dp-Duox         PLTKSIMSACEEVNQVR-----------KLPYFIHHFENFG------------ 527
Cb-Duox         NLNEKIAEGCAEANRQR-----------DAPSFAHRFETF-------------- 528
Mg-NoxC         IVGEILADRCKALTARGRHDGS-------KIEYHFMIEVFN------------ 639
Fg-NoxC         VVGEILADKCRELTLRGWQDGI---HELGRIEWLVNYDGYDDHIN-------- 622
Cm-NoxD2        SVVRSVHQSIRAVAAARAA------RGLPQRNVFFMKENF-------------- 572
Cm-NoxD1        ALGASVRRAMHKVQRQPER------LGT-KKPILFIQERF-------------- 544
Pt-NoxD         AIARTLQRTAHKVTAQHHYTVRRATGTACRCRVLVHKENF-------------- 560
An-Fre1         MMADECRLAVYEAMRR------------GCRGIRYFEEAFTW------------ 750
Sc-Fre1         TFNDDFRNAVVQGIDS-----------SLKIDVELEEESFTW------------ 686
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