

Additional file 6

**Amino acid sequences of vertebrate Nox regulatory subunits; p47*phox*, NOXO1, p67*phox*, NOXA1, p22*phox***

To describe species of the genes, we use the same abbreviations as in Additional file 4.

Sequences are available from the indicated databases:

[http://www.ncbi.nlm.nih.gov/\(GenBank™numbering genes\),](http://www.ncbi.nlm.nih.gov/(GenBank™numberinggenes))

<http://www.ddbj.nig.ac.jp/searches-e.html> (DDBJ™ numbering gene) or

<http://www.ensembl.org> (ensembl numbering genes).

>human-Hs-p47*phox*: GenBank™ No. NM\_000256

MGDTFIRHIALLGFEKRFVPSQHYVYMFLVKWQDLSEKVVYRRFTEIYEFHKTLKEMFPIEAGAIN  
PENRIIPHLPAKWFWDGQRAAENRQGTLETCGTLMSLPTKISRCPHLLDFFKVRPDDLKLPDNDQ  
TKKPETYLMFKDGKSTATDITGPILQTYRAIANYEKTSSEMALSTGDVVEVVEKSESQWWFCQM  
KAKRGWIPASFLEPLDSPDETEDPEPNYAGEPYVAIKAYTAVEGDEVSLLEGEAVEVIHKLLDGWW  
VIRKDDVTGYFPSMYLQKSGQDVSQAQRQIKRGAPPRSSIRNVHSIHQRSRKRLSQDAYRRNSVR  
FLQRRRRQARPGPQSPGSPLEERQTQRSKPQPAVPPRPSADLILNRCSESTKRKLASAV

>dog-Cf-p47*phox*: DDBJ™ No. BR000287

MGDTFIRHIALLGFEKRFVPSQHYVYMFLVKWHDLSEKVVYRRFTEIYEFHKMLKEMFPIEAGDIN  
PENRIIPHLPAWRWFDGQRAAESRQGTLEYYNTLMGLPVKISRCPQLLDFFRVRPDDLKLPDTSQV  
KKPETYLVFKDGKSSVTDITGPILQTYRAIADFEKTSSSQMALATGDVVDVVEKSESQWWFCQTKT  
KRGWVPASYLEPLDSPDEAEDPEPNYEGEPYVTIKAYTAEMEDEMSELQEGEAIEVIHKLLDGWWV  
VRKDDITGYFPSMYLQKSGQDAAQHRQIKSRGAPPRSSIRNAHSIHQRSRKRLSQDTYRRNSVP  
TQPGKQPAPVPPRPSADLILHRCSESTKRKLASSV

>mouse-Mm-p47*phox*: GenBank™ No. NM\_010876

MGDTFIRHIALLGFEKRFIPSQHYVYMFLVKWQDLSEKVVYRKFTEIYEFHKMLKEMFPIEAGEIH  
TENRVIPHLPAWRWFDGQRAAESRQGTLETFNGLMGLPVKISRCPHLLDFFKVRPDDLKLPDTSQ  
AKKPETYLVFKDGKNNVADITGPILQTYRAIADYEKSSGTEMTVATGDVVDVVEKSESQWWFCQM

KTKRGWVPASYLEPLDSPDEAEDPDPNYAGEPYVTIKAYA AVEEDEMSEGEAIEVIHKLLDGWW  
VVRKGDITGYFPSMYLQKAGEEITQAQRQIRGRGAPRRRSTIRNAQSIHQRSRKRLSQDTYRRNSVR  
FLQQRRRPGRPGPQSTDGTKDNPSTPRVKPQPAVPPRPSSDLILHRCTESTKRKLTSAV

>zebrafish-Dr-p47*phox*: Ensembl No. ENSDARG00000033735

MAETYVRHVELLGF EKRFPPSQHYVYMLLVKWS DQSEKLVYRRYPEVHTLHKTLEMFPIEAGDI  
DEKDRIIPTLPAPKWLDNQKTTETRQATLAEYCRSLLNLPANISRCQLIRDFFKMRPEDETPPAPHP  
YKRNETFIMSTNRVRSNTTSEITGPPILETYRVIADYSKSSKYELTLKMGDMVDIVEKSPNGWWFCQ  
CESRRGWVPASYLEPLDGADESEEPENYAGELYKTTRGYKAVEQDEM TLEAGVIIHKLKLLDGW  
WVVRKGEETGFYPSMFLC RTGEEKVE DAERDVVRRATPPRRRSTIRNAQSIHSTVRRRISQDSYRK  
QSRRFLQQRGR LNSHRIGTR SPLQERRTNK NIEKSSAPQA EDEDKSVVPPRPSPQLILERC TEN  
TSKRMSMQEA

>chicken-Gg-p47*phox*: GenBank™ No. NM\_001030709

VGDTFIRHIELLRYEKRFPPSQHYVYMFVWKWDLSEKLIYRRFTDIYEFHKALKEMFPIESGDINA  
ENRIIPHLAPKWF DGGQRSTQSRQGT LAEYCYTLVNLPHKISR CRHVVSFFFEVRPDDMNPV TDSQI  
RKPEVFLLPKDAKNTSDITGPIVLQTYRAIADYEKSSKSEMAVKAGDAVDVVEKSETGWWFCQLK  
TKRGWVPAAYLEPMDGPD ESEEQEPNYAGELYVVQKSYTAVEEDELTLKEGDTIEVIHKLLDGWW  
VIRKDETTGYPSMYLQKSGEVNSPEKSGLRNHNIPRRRSTIRNAKSIHNKGRKQISQETYRRNSK  
KYMQRNRNMRGNLQNKDIISEKNEQEENKSKA QPAVPPRP SKDLIMNRCTESTRRI

>rat-Rn-p47*phox*: GenBank™ No. NM\_053734

MGDTFIRHIALLGFEKRFVPSQHYVYMFVWKWQDLSEKVYRKFTEIYEFHKMLKEMFPIEAGEIH  
TENRVIPHLAPR WYDGRAAESRQGT LTEYFN SLMGLPMKISRCPHLLNFFKVRPDDLKLPNDS  
QVKKPETYLTAKDGKNNVADITGP IILQTYRAIADYEKSGKTEMTVATGDVVDVVEKSESGWWFCQ  
MKTKRGWVPASYLEPLDSPDEAEDPDPNYAGEPYVTIKAYA AVEEDEVSLSEGEAIEVIHKLLDGW  
WVVRKGDITGYFPSMYLQKAGEEITQAQRQIRSRGAPRRRSTIRNAQSIHQRSRKRLSQDTYRRNSV  
RFLQQRRRPARPGPQSPDSK DNPSTPRAKPQPAVPPRPSSDLILHRCTESTKRKLTSAV

>frog-Xr-p47*phox*: Ensembl No. ENSXETG00000018448

MTEPHIRHIQLLGF EKRFIP SQHYVYMFVWKWQDLTEKLVYRKFTEIYEFHKSLKEMFPIEAGDIS  
KEHRTIPHLAPKWF DGLRSTENRQV TLSDYFSSLLS LPPKISRCPHVLNFFQVRSDDVNPVANNT  
NGRKPETFLLKVD TAKKNVSDITGP IILQSYRVIADYEKNSKSELA AKNGDVVEIVEKSENGWWFC  
QLRNKRGWMPAAYLEPLDGPDESEEQDPNYEGDLHITTKDYSGELDDEL SLQEGENVEVIHKLLD  
GWWVVRKGSITGYFPAMY LQKSGETAPANENPSKRKGLPPRRSTISNANSIHKKERKQISQDTYRR  
NSKKYLKQRQSIVDTKSPIITEENKEEESKSKPQPAIPPRPSKELILDRCSENTKSKI

>tetraodon-Tn-p47*phox*: DDBJ™ No. BR000288

MADTYVRHVQLLGF EKRFPPSQHYVYMLLVKWS DLTEKLIYRTYPEIYTFHKALKEMFPIEAGKIE  
KRDRIPSLSAPPWLD SQKSTETRQTSLSDY CQALVNLPPHISRCTHLTSLFKVRPEDENPAAPNTL  
KRNETFVVSRDLARGNASEISGP IILD MYRAIADYTKTTKY EINLLAGDQVEIVEKNQNGWWFCQM

DSKRGWVPASYLEPLDGPEESEEAADPDYEGSELFITIKAYKAEQEDEISLDLGESIEVIHKLLDGWW  
VVRKGEGETGYFPSMFLQKASKRAQAEAARNHLQGQKPPRRRSTIRNAKSIHNKSRQRLSQDAYRR  
NSRRYLQQKGGQRDLQNKYARTAAKSPLQERKNQGNIPPEESGTASEGEPKKEAPVVPPRPSPELIL  
QRCSDNTRKKIS

>fugu-Tr-p47*phox*: GenBank™ No. AB099897

MAETYVRHVQLLGF EKRFPSQHYVYMLLVKWSDLTEKLIYRTYPEIYTFHKSLKEMFPIEAGKIE  
KRDRIPSLSAPPWLD SQKSTETRQTTLSDYCHSLVNLPPHISRCTHLTGFFTVR PEDENPPSPNILK  
RNETFVVS KDLARGNVSEISGPILDMYRAIADYTKTTKYEINLHAGDQVEIVEKNQNGWWFCQCD  
SKRGWVPASYLEPLDGPEESEEAEPDYGGSPCELYITIKAYKAEQEDEITLDLGESIEVIHKLLDGW  
WVVRKGEQMGYFPSMFLQKANKREQSESSRANVQGHKPPRRRSTIRNAKSIHNKSRQRLSQD TYR  
RNSRRYLQQKGGQLVKPDYPRNVAKSPLRERRNQGNIPPEESSTISENEGKREAPVIPRPSPELIL  
QRCSDNTRKKISIHKSSSASTSKPGQA

>human-Hs-NOXO1: GenBank™ No. NM\_172167

MAGPRYPVSVQGAALVQIKRLQTFAFSVRWSDGSDTFVRRSWDEF RQLKKT LKETFPVEAGLLRRS  
DRVLPKLLDAPLLGRVGRTSRGLARLQLE TYSRLLATAERVARSP TITGFFAPQLDLEPALPPGS  
RVILPTPEEQPLSRAAGRLSIHSLEAQLRCLQPFCTQDTRDRPFQAQAQESLDVLLRHPSGWWLV  
ENEDRQTAWFPAPYLEEAAPGQGREGGPSLGSSGPQFCASRAYESSRADELSVPAGARVRVLETS D  
RGWWLCRYGDRAGLLPAVLLRPEGLGALLSGTGFRGGDDPAGEARGFPEPSQATAPPPTVPTRPSP  
GAIQSRCCTVTRRALERRPRRQGRPRGCVDSVPHPTTEQ

>dog-Cf-NOXO1: GenBank™ No. XM\_547183

MAGSRHPVSVRAAALVQTGRLQTFAFSVCWSDGSDTFVRRSWAEFKELHKT LKEAFPVEAGLLRR  
SDRILPKLPDTSLLVRGGRTGRGLARLRLLD TYTRALLAAAEQLSRSAVLTGFFEPQ PVDLEPVLPP  
GSLVILPTPEEPHRRPPHSPAICSLEAQLRCLQPFSTQDTQGWPFHARAQEVIDVLLRHPSGWWLV  
ANEEQQMAWFPAPYLEEAAPDREGTTLRSSGSQFCASQAYESSHADELSVPAGARVSVLETS DRG  
WWLCRFRGRSGLLPAVLLQPEGLGALLSGPGLHREANSKEDRGGEAQTPEACQATTLSPSV PARP  
PLSAIRSRCOSVTRRALASKYPPRAGQ

>chicken-Gg-NOXO1: Ensembl No. ENSGALP00000008924

YMMFVSWSDQNNILIYRTLEEFKRFHKELKRKFPIESGLRRSDRTIPRFK DINGKQKKS GKINRSL  
ERLKLETYTQELLKVD AKISQGEDVIQFFKAQTQDLDP CFPEDSVVIMPSEIGGEKKKEVQQQQL  
SITYPQVSQSYRCIETFETKDTKNKTFKVAKKEIVEVLLKDMTGWWLVENADKQIAWFPASYLEQIS  
AHKDIQNVES SDEEGSLYFVMRAYEAQKADELSLNKGVVVEVRRSDNGWWLIRYNGRKG YMPS  
MCLQAYKNPHRLQTIMNSGLHISTPNL CSPSPALQPLRDSTARDCTSGDGSDEDELES DSSLS SSGS  
APSGVLSWKPDLSRSLPEVEQAVPMRPSAHEILQRCSTVTKRAVQQA

>mouse-Mm-NOXO1: GenBank™ No. NM\_027988

MASPRHPVSAHAVALVQMDRLQTFAFSVCWSDNSD TFVRRSWDEF RQLQKTLKKT FFPVEAGLLRR  
SEQVLPKLPDAPLLTRRGHTGRGLVRLRLLD TYVQALLATSEHILRSSALHGFVVPKPLDLEPMLPP

GSLVILPTPEEPLSQPRGSLDIHSLEAQSIPCVQPFHTLDIRDRPFHTKAQEILDILLRHPSGWWLVE  
NKDQQVAWFPAPYLEEVATCQQQESGLALQSGRQFCTTQAYEGSRSELSVPSGARVHVLETSDR  
GWWLCRYNGRTGLLPAMSLQPEGLGSLGRPGFPDSAGADKVAEDRTIPPVVPTRPCMSAIQSRCC  
SITRRALGQEQGTRVPR

>rat-Rn-NOXO1: GenBank™ No. XM\_220221

MASPRHPVSAHAVALVQMERLQTFAFSVCWSDNSDTFARRSWEEFRQLQKTLKKIFPVEAGLLQRS  
ERVLPKLPQGACRNAPLLTRRGHTGRGLLRLLLETYVRSLLATSQHIVTSSTLNSFFAPKPLDLEP  
MLPPGSLVILPTPEEPLSQPIGSLAIHSLEAQMRCCLQPFHTLDTKDRPFHTQAKEILDILLRHPSG  
WWLVENKDQQTAWFPAPYLEEATGQQQESGMAVQSGRQFCATQAYEGSRPDELSVPSGARVHV  
LETSDRGWWLCRYNGQTGLLPAVLLQPEGLGSLGRPLPDSGGADKVTEGRTVPPVVPTRPCMS  
AIQSRCCSITRAVGQEQRTQVPP

>frog-Xt-NOXO1: Ensembl No ENSXETT0000015702

WSDHNEILYRTFEDFKKLNRLKFKFPLEAGLFRKSDNLLPKLKDVPFRKNRTTNRFIERLRL  
EKYSQELLRTDGKISQCDLVLFKFFTPSNNDLNPKFPENSLVMMTSDSKDQKEQKKPLPEAPAIHPI  
VSQQYICMEDYETKDTKNRPFKVKRHELVGVLIKENTGWWLVENEKHLAWFPAPYLKDVDNSE  
DTDSGTSEDEGVLYAAKAYEAMNSDEVSITVGVLEVEIEKSNNGWLLIR

>zebrafish-Dr-NOXO1: DDBJ™ No. BR000290

LIKLFIRREHRNMDINIHSPPQLYMTTVLWSDGNEITVYRSLEDFKKMHRQLKKKFPPSNPFKR  
SARIVPEFKGNKWSGSKSVLRMKALEEYCGQLKSDAQVCRSSELIQFLLPKAHDNLADFAKNCIV  
IMPSDVTLGSSKAESNSGVTPFVVTETYRCIANYETKDTKNRPFKVEVDETVDVLIKDQKGGWWLVE  
NESKHLAWFPAPYLERAEMADDGPDMDNESFQSAGVFYVATKAYKATNSDELSVELGSVLEVLQ  
KSDNGWWIVRYNRKAGYVPSMYLQPHNNPRILLKSTQKEISRSTDLAQLQHPQTLQDSRLRELS  
RSQGNLLLQPAETDIMDKQKSDPCLNKMPSTPKVPPRPAVQEILTRCTTVTRKNMQ

>tetraodon-Tn-NOXO1: DDBJ™ No. BR000291

METQRYPI SARLVGVLHKEKSKVGAHKSQVVLFHARFNQQLCPLQMYMTSVLWSDHNEIVVYRTF  
QDFRKMHLKRSKGGKSPTRSLVRLKFLQKCYNELLSCEPRVSQSADLIQFFHPNAQDLEPEFSK  
NRQEEVKAEAGHGSVGNVTQPFVTVTYRCVSYETKDTKNKPFKVAADKVDVLIKDKAGWWLV  
ENEEKRMAWFPAPYLEKLEEDGEDDDTDGTRTLYLTAKNYKASKGDEISVAVGAVVEVLQKSDSG  
WWLIRYQGKVGYPVTLCLQPYNRPQVRLNGAAFPGLQQSNKLSRRGNLLQLPSAGRSPSPQQP  
HADGRQRSHSLNALLETLPAQPARGAAPDTGTPSPQQAPPVIRPQYPRGQNDARLRSQHLQGS  
RNPQGSTQTPGPGDPHQVHHHPQEQQRSSVAHPTRDTE SVKLPLARFSCSFR LHA

>human-Hs-p67*phox*: GenBank™ No. NM\_000433

MSLVEAISLWNEGVLAAADKKDWKALDAFSAVQDPHSRICFNIGCMYTLKNMTEAEKAFTRSINR  
DKHLAVAYFQRGMLYYQTEKYDLAIKDLKEALIQLRGNQLIDYKILGLQFKLFACEVLYNIAFMYAK  
KEEWKKAEEQLALATSMKSEPRHSKIDKAMECVWKQKLYEPVVIPVGKLFPRNERQVAQLAKKD  
YLKATVVASVVDQDSFSGFAPLQPQAAEPPRPKTPEIFRALEGEAHRVLFVFPETKEELQVMP

GNIVFVLKKGNDNWATVMFNGQKGLVPCNYLEPVELRIHPQQQPQEESSPQSDIPAPPSSKAPGRP  
QLSPGQKQKEEPKEVKLSVPMPYTLKVHYKYTVVMKTPGLPYSQVRDMVSKKLELRLEHTKLS  
YRPRDSNELVPLSEDSMKDAWGQVKNYCLTLWCENTVGDQGFDPKESEKADANNQTTEPQLK  
KGSQVEALFSYEATQPEDLEFQEGDIILVLSKVNEEWLEGECKGKVGIFPKVVFVEDCATTDLESTR  
REV

>mouse-Mm-p67*phox*: GenBank™ No. NM\_010877

MSLAEAIRLWNEGVLAADKKDWKGALEAFSEVQDPHSRICFNIGCVNTILENLQAAEQAFTKSINR  
DKHSAYAYFQRGMLYYRMEKYDLAIKDLKEALTQLRGNQLIDYKILGLQFKLFACEVLYNIALMHA  
KKEEWKKAEEQLALATNMKSEPRHSHKIDKAMESIWKQKLFEPVVIPVGRFRPNERQVAQLAKKD  
YLGKATVVASVVHQDNFSGFAPLQPQSAEPPPRPKTPEIFRALEGEAHRVLFVGFVPETPEELQVMP  
GNIVFVLKKGSDNWATVMFNGQKGLVPCNYLEPVELRIHPQSQPQEDTSPESDIPPPPNSSPPGRL  
QLSPGHKQKEPKELKLSVPMPYMLKVHYKYTVVMETRLGLPYSQLRNMVSKKLALSPEHTKLSY  
RRRDSHELLLLSEESMKDAWGQVKNYCLTLWCEHTVGDQGLIDEPIQRENSDASKQTTEPQPKEG  
TQVVAIFS YEAAQPEDLEFVEGDVILVLSHVNEEWLEGECKGKVGIFPKAFVEGCAAKNLEGIPRE  
V

>dog-Cf-p67*phox*: DDBJ™ No. BR000293

MSLAEAISLWNEGVLAADKKDWKGALEAFAAVQDPHSRICFNVGCMHTILGNMPEAEKAFTRSIN  
KDKHLAVAYFQRGMLYYHMEKYDAAIKDLKEALTQLRGNQLIDYKILGLQFKLFACEVLYNIAFMY  
AKNEEWKKAEEHLALAMSMKSEPRHTKIDKAMECVWKQKLYEPVVIPMGRLFRPNERQVAQLAK  
KDYLKATVVASVVDQDSFSGFAPLQPQAAEPPPRPKTPEIFRALEGEAHRVLFVGFVPETPEELQV  
MPGNIVFVLKKGNDNWATVMFNGQKGLVPCNYLEPVELRIHSQQQPQEEASPESDIPAPPSSSAPG  
RPQLPPGWSSFCFLSPQDVKLRVPMPYTVKVHYKYTVVMEIQAGLPYSQLRDMVAKKLELLPEHT  
KLSYRPPDSHELEPLSEDNMKAAWGQVRNYCLTLWCENTVGDQGFDPQSEKSEANNQTTEP  
TLKEGGHVVALFTYEATQPEDLEFQQGDIIQISMVNEDWLEGECKGKIGIFPKAFVEEHATTDLES  
SPRGV

>zebrafish-Dr-p67*phox*: DDBJ™ No. BR000296

MSFVSTLRQWDEAVACVEQRDPDAALRIFLSIEEKNSKIAFNIGCLCLNNSDLDEAEKAFDGSIGKD  
EHLAVAFFQRGVTFYKKEKFEESLLDFQQAQFKQLRGNQLIDYTPLGLRYKLYACEVLHNIGLAQAQ  
LGKWEKAQENLLTALSRLADAKFSHIDHALDAILKHKLFPLVEVRAGLLFKPNKKYVAELEKRDYL  
GKAKVVASVVPADDFSGFAPLQPQIDNVPSIPKVPEVLRVLEGEPTVLYEFVPETKEELAVLPGNIV  
FVLHRGTDN WASVVFNEKRGLVPYNFLEPLDIVTMTSKPVETEALNENDDIPAPPRRAAPSRPVAP  
EGLKTVNAKLYSPQTVNTRFSGCVVKVHFQFTIAIAIAHGQPYGVILQMISSKLLKPASTLTLRYAK  
EGSAERVIIEDESEMEAVWNSAKDGRLTLWCSVTEGKSASHAKVVALYSYESSTPEDLEFKQGNVIT  
VLSKVNDREWLEGQCNGKIGIFPSSFVEPLNGDPH

>chicken-Gg-p67*phox*: DDBJ™ No. BR000295

MSLVETIRLWQEGVCAADGKEWGAALKAFTAVQNPPAKICFNIGCTHLVLGQLAEAEAAFTQSISC

DKHLAVAYFQRGTVFYKRHNHEMALKDFKEALQLRGNQLIDYKILGLRYRLFACIILYNIALVYAT  
MENWKKAEHLTLAMSSKSEPQH NKIDRAMEAILKQKLYEPVAIPTGKLF RPNKQVAQLEKKDY  
LGKAMVVASVVDKDSFSGFAPLQPQASGPPRPKTPEILRALEGQPHRVLYEFIPETAEEQLVLPGN  
IVFVLKKEKDNWATVMFNGKKGIVPCNFLEPMELQHKLHVQDEAPLEPDIPPEPPSSTAPRRPAP  
GQEKPDTPIHHLQESEPDIPKYVLKVHYKYTVAMQVKPDL SYKELLGLVCDKLELQPEHTMLRY  
KSAASGELVPLSAQNLEEAWSHSDKQCLTVWCDCTEGEGFLPDSKPEEPQAAAETGPTQVVAQY  
SYEATQPEDLEFQAGDVILVLSKVNEDWLEGQCNGKIGIFPSAFVRDGNTKDP

>rat-Rn-p67*phox*: DDBJ™ No. BR000294

MSLAEAIRLWNEGVQAADKKDWKGALEAFSEVQDPHSRICFNIGCMYTILDNLQEAQAFTKSIN  
RDKHLAVAYFQRGMLYYSMEKYLLCVYCLREALVTRFKKQVLSPKPEGLQFLLQRSPLVYNIALMH  
AKKEEWKKAEEQLALATNMKSEPRHSKIDKAMESIWVSVVVDGPCCLAQYHVQRASHKQVPVLS  
KDLLGEETVVASVVHQDNFSGFAPLQPQSAEPPRPKTPEIFRALEGEAHRVLF GFVPETPEELQV  
MPGNIVFVLKKGSDNWATVMFNGQKGLVPCNYLEPVELRIHPQSQPQEDTSLES DIPPPN SSPPE  
RLQLSPGHKQKEEPKEVKRSVPMPYMLKVHYKYTVV METQLGLPYSQLRNMVSKKLELLPEHTK  
LSYQRRDSPELLLLSEESMKDAWAQVKNYCLTLWCEHTVGDQGFVDEPKEKENS DADNR TTEPQ  
PKEGTQVVAFISYDATQPEDLEFVEGDVILVLSHVNEEWLEGECKGKIGIFPKAFVEGCAAKNLEG  
TPREV

>frog-Xt-p67*phox*: DDBJ™ No. BC099979

MALVEIMRLWSEGVAAAENEDWNGALKSFTSITDPRSKICFNIGCCHLVLDLEKAEKAFTLTIERD  
MHLAVGYFQRGFVFFQRGKYSLALQDWTRAYTEM RGNQLIDYKILGLIFKLYSCEILHNIALTHAK  
EGKWAKAEESILLALSQKVELRHNTKLEKAMEDILKEKVFAAVKIPKGRIFQPNERLVEQLEKKDY  
LGKALVVASVVDKDSFSGFAPLQPQASNPPRPKTPEILRTLQGEPHRVLF EFNPETAEEMQVLPG  
NIVFVLKKGDDNWATVVFNGKKGIVPCNYLEPVELRFQSAQQTGVQSELDSP TNRPQQSDVPAPP  
DATPPQLLKNTKEAVAVASYLVKVYYKYTVAIQISSKLPFADLLTLISSKLQLLPSRMKLSFKEDQDD  
VLLNEENTEKAWSLATDNCLKLCCTEVQVRQARS LYCSTMQGYFKAQGKYPIALFEYEATQPEDL  
PFCKGDIKILSHVSEDWWEGECQGRMGIFPKVFTEE

>tetraodon-Tn-p67*phox*: DDBJ™ No. BR000297

MSFLDTLRQWDNACTVADGQDFSAALQVFLSIQEPNSKICFNIGCLHLLNEDLSAAEKAFDSSISK  
DEHLAVAFFQRAITFYKMSRQTHRPFHFQQTFKELRGNQLIDY GALGLRYKLTA CEVLHNMALAE  
AQLGRWEKAQESLVKALDYSSDSKLG AIDKALQATLKQKLFKLTGFPSKVLFKPNKRYVAELEKKD  
YLCKAKVVASVVPQDEFSGFAPLMPQVRPHLRAASSPTAESNSARVHRALEGE PHTVLYEFVPETS  
DELAVVPGNVVFLQK GADNWASVVFNERGLVPYNYLERLEISLAAKLDVRTCQPGKPRPPSQ  
QPPTRPERNLLTLFSGLEFQEAQLVDDSYVVKVRFTFTFAVIVPRGSSYATLAQKVGEKLSVPADAVI  
LSLSSEAAEEDVINGSTDM EAVWGRASGRCITLWCRLAEQTSETEP RRETFL LALHTYDSPNPEDL  
TFQQGDKILLLSKVNQDWLEGQCHGNTGIFPAAFVEEVS VSE

>fugu-Tr-p67*phox*: GenBank™ No. NM\_001032682

MSFLDTLKQWDKASTVADRQEFSEALEIFLSIEEPNSKIYFNIGCLHLLNEDLKDAEKAFDSSICKD  
EHLVAFFQRAITFYKMTRQEYSLADFQQTLKELRGNQLIDYGALGLRYKLNACEVLHNIALTEAQ  
MGHWEKAQESLVKALDYRTESKLGIIDNALQATLKQKLFKLGIFPSKVLFKPNKHVYVAELEKKDYL  
GKAKVVASVVPQDEFSGFAPLMPQVESGQTFKPEPELLRALEGEPTVLYKFPVETSDELAVVPG  
NVVFLVQKGADNWSVVFNERRGLVPYNYLERLEITMASKQNNVQSRPPSRQPPTRPERKSGLPP  
CADDRNTQMKESELADDDSCVVKVRYTFTFAVLVPRGSSYATLAEKISEKLSVPANAIVLSLSSEATE  
QNVIDGGTMEGVWSRVSGRCITLWCRLAQTNERVQKESLLALHSYDSSNPEDLSFHQGDRTLL  
SKVNQDWLEGEFNGNTGIFPAAFVEEV PANG

>human-Hs-NOXA1: GenBank™ No. NM\_006647

MASLGDVLRVHHLGAQAVDRGDWARALHLFSGVPAPPARLCFNAGCVHLLAGDPEAALRAFDQAV  
TKDTCMAVGFFQRGVANFQLARFQEALSDFWLALQLRGHAAIDYTLGLRFKQLQAWEV LHNVAS  
AQCQLGLWTEAASSLREAMSKWPEGLNGLDSDALDQVQRGSLPPRQVPRGEVFRPHRWHLKHL  
EPVDFLGKAKVVASAIPDDQGWGVRPQQPQPGANHDARSLIMDSPRAGTHQGPLDAETEVEGADR  
CTSTAYQEQRPQVEQVGKQAPLSPGLPAMGGPGPCEDPAGAGGAGAGGSEPLVTVTVQCAFTVA  
LRARRGADLSSLRALLGQALPHAQQLGQLSYLAPGEDGHVWVPIPEEESLQRAWQDAAACPRGLQL  
QCRGAGGRPVLYQVVAQHSYSAQGPEDLGFRRQGDVTVLCEEPDVPLAVDQAWLEGHCDGRIGIF  
PKCFVVPAGPRMSGAPGRLPRSQQGDQP

>dog-Cf-NOXA1: DDBJ™ BR000298

MPSLGDVLDVHWRGVQAVARGDWGCALRLFSGDPDPPAKMCFNLGCVHLLAGDPEAALRAFDQA  
VTKDTCMAVGFFQRGVANFQLERFQEALSDFRLALALQLRGNAIDYTLGLRFKLTWEVLFNNG  
AAQCALGLWAEAAAGSLEEALCKGPEGAGEDLHAALAQVQKQATLQLRQVPRGEVFRPHRRHVEH  
LEPVDFLGKAKVVSSAIPDDHLQGSRPQQRQVSGAPSSQPPNGPGDPSCGASLACSPHPSAPRPSQ  
LGPQRAALGWTEPGGCLSASSQVVATGGPESLTVTVQCAFTLALKVPWGAGLPHLRTLSSQALPL  
QAQHGQLSYRDPSEARWVALPGEEALQGAWRDAA SPRGLQLQCRAAGSRPVLYQAVAQHNYCA  
QGPEDLDRQGDMDVLCAGQGPVPLHVVDPAWLEGHCDGRIGIFPKCFVVPAG

>mouse-Mm-NOXA1: GenBank™ No. NM\_172204

MSSLGDQIRDWHRGVLA VAREDWDSALCFFSDVREPLARMYFNRCVHLMAGDPEAALRAFDQA  
VTKDTCMAVGFLQRGVANFQLQRFQEAVSDFQLALALQLRDNAVIDYTLGLNFKLQAWEVLYNMA  
SAQCQAGLWTKAANTLVEAISKWPEGAQDILDIAMDKVQKQVPLQLQVVPKGEVFP PRRYLKHL  
EPMDFLGKAKVVASVIPDDHNAQPQQRSAEHAGHQSSSMCKRVLSTTGHTSPGLYDSSLASR  
RPGPGPSEVSSGSEGAATKDPESLVTVTVQCHFTVPLKVPRGTGLSSFTLLAQALLHQTQTGQLS  
YKAPGEERSWIPISTEESLQSIWRNVVPGGGLQLQCQGVWGRPVLVYQVVAQYNYRAQRPELDLF  
HQGDTVDVLCVDEAWLEGHDRDGCVGIFPKCFVVPAGAYVEAMLVLPQPGDQN

>rat-Rn-NOXA1: DDBJ™ No. BR000299

MSSLGDQIRDWHRGVLA VAREDWDSALCFFSDVREPLAKMYFNMGCVHLMAGDPEAALRAFDQA  
VTKDTCMAVGFLQRGVANFQLQLQAEAVSDFQLALALQLRGNAIDYTLGLDFKQLQAWEVLYNMA

SVQCQAGLWTKAANTLVEAISKRPEGAQDTLEAAMDKVQKQVPLQLRQVPKGEVFPQPPRRYLKHL  
EPMDFLGKAKVVASVIPDDHNSDIQPQQSSQVEQAGLQSSSPVCKRVLSTRGGHMSPLWDSLLAT  
GGPVPGPSSESSSAEGTATKDPESLTVTVQCHFTVPLKVPRGTDLSSFRTLLSQALLQQTQKGGQFS  
YKARGEDRAWVPISTEDSLQSVWRNVPVSPRGLQLQCRGAWGRPVLYQVVAQYDYRAQRPEDLDF  
RQGDTVDVLCEVDEAWLEGHDRGVRGIFPKCFVVAATCVEALPVPEPQPGEQH

>chichen-Gg-NOXA1; Ensembl No. ENSGAL0000008952

MAYRELLRRWHQAALAADGGDWDAALETLCGIEEPPARICFNVCGMHLRAGRLRDALRAFDETV  
MKDNSLAVGYFQRGFVCLQLEMYEEALSDYHMAFSLRKNPFIDYKQLGLRHILYAWEVLYSTAAT  
QCRLQQWQEARDTLEKAVVWRPEGRSATLALALERVQNHQFLEPMQVPPGFEFFRPRKKEVEQLD  
SKDFLGKPKVISSIIPNDEYIGFEPLRPQEMGAERGCRCIPVFLSRDRESGYRVLSHYYPEGTEKLA  
VKASSLVFVLARGANGWATAIHDGQKLHIPTSLLEPASKMDKWPSDSTEKIGDGIPLPPAQVPPSRL  
HMLPCHYGRTESPLTHREASSSTRPAVLRVRCCTVVVRAGEVPSVPALRALLRERFGQAERGR  
LSYRHLDGKELGAVSGEEDLEKMWQQQLTDGRITLCCQSDSHSGRPILYRMLAQHSYSAQPGDL  
EFSKGDVLDILSEVNEDWLEGHCNGKTGIFPKCFATQTSCAAFP

>frog-Xt-NOXA1: GenBank™ No. BC075351

MHYKEVRRWHEGVAAEGKDYDAALRSFTAIEDPPSRIWFNVGGIYLLRGDLPRALEAYDKSLA  
QDPCLAGVYYQRGYLQFKLGRYEKALSDCHLALSNLRNNSFIDYKQLGLRHVLFWSWEAQYNMAAV  
LCSLGRWESAEEKLKETLQGDGRNAKLDWALDQVQRRSLLQPMSVPEGEFFRPRKQVEVEQLNSV  
DFLGKPTVISSVVPNDQYSGFEPLRPQQPGFYEPKRDAMQCREAGYHRVVVHYYPENSNEVAVKA  
NSVLFVLNKDGDWATAIHDGQKILIPSTFLEPTNPPKADIKKMNGIPLPPMKTPTPRPNVRPGME  
PLTGVQAGAPVPPQPAGGAAEPYKIKALPVGMEPIVEVAVPVQRSVPTHKETGNVPLGNDASLVED  
AGRTHKPKGESAPEPGFPTRQTGPDNGPMATPVPTDDDKLVLSVHAEFTVNMTVSKAITYPELQ  
GALREELRKHGEQMANHLSYRDPESRGLTPVTGSKDWQEVKLSRANQVTLCCKETTLCAGRPVL  
YRMRAQDYDLAQGPADLSFQQGDLISILSEVNGEWLEGHCHRGIGIFPKCFAQRAEGI

>zebrafish-Dr-NOXA1: GenBank™ No. XM\_679087

MLYIELIRLWDEAVKAIDIRDWQGALSCLNQTIDHNCRTMFVVASTHIALGQVDLAIKALDRVIAKD  
SCLAVGFFQRSVHMMANRLEEALSDCIWAQKYMRENVIDYKQLGLRYKLYSWQVLYNAAVHS  
RLQQWDKARDILLAASQERGAGRSNLIDTALEAISRKDVLEPLLLPEGEVFRPRKLEVDQLKPRDF  
LGEAKVITSMIPNDDFRGFDPLRPQKPGYYEPKVEDGQDSRYMIMKSAYVAKGAGELTVPAGAEVF  
VYSDDDRDLAVIYDGKELANGIPHPALKPPNRPQLPSQRSLELHPSSAGASHTTPTTSSSTRIP  
PQQIQTSPQESGSVVVKVHYTYTMALRVPAETPFRDLQEKIAQKLGQPAMNIRLRHRRPGTRVLT  
LNGDDGLDCLEGVAESGRAQIWCQNEPLANRTILYQMVVALYDYNAQGPEDLEFSEGDTIDILSEV  
NEEWLEGHVAGNIGIFPQSFAHRDTSISGASTD

>human-Hs-p22 $\text{phox}$ : GenBank™ accession No. NM\_000101

MGQIEWAMWANEQALASGLILITGGIVATAGRFTQWYFGAYSIVAGVVFVCLLEYPRGKRKKGSTME  
RWGQKYMTAVVKLFGPFTRNYYVRAVLHLLLSVPAGFLLATILGTACLAIASGIYLLAAVRGEQWTP



IEPKPRERPQIGGTIKQPPSNPPPRPPAEARKKPSEEEAAVAAGGPPGGPQVNPPIVPTDEVV

>dog-Cf-p22*phox*: DDBJ<sup>TM</sup> No. BR000286

MGQIEWAMWANEQALASGLILIMGGIVATAGQFTKWYFGAYSIGAGVFVCLLEYPRGKRRKKGSTM  
ERCGQKYMTKVVKVFGPLSRNYYIRAFHLHLGLSVPAGFLLATILGTACLAIASSIYLLAAYHGEQWIP  
IEPQPKERPQVGGTIKQPPSNPPPRPPAEARKKPSEEEAAGAVGVSGGPQENPVPVIDEVV

>zebrafish-Dr-p22*phox*: GenBank<sup>TM</sup> No. BC056702

MAKIEWAMWANEQALAAGLIYLTGGIVGVAGQFRGWQFAAFGIAAGVFVCLLEYPRSKRKGKTSIE  
RSGQYCFVTVKVSFGPLTRNYYVRAFLHAALCVPGGFMLATVLCVCLGMASLIYLSAPIHGEHWE  
PILHIETKKRLGESIKEPPQNPPPRPPPELRRKKADNLDAAAYDNPMSTINE

>mouse-Mm-p22*phox*: GenBank<sup>TM</sup> No. NM\_007806

MGQIEWAMWANEQALASGLILITGGIVATAGRFTQWYFGAYSIAAGVLICLLEYPRGKRRKKGSTME  
RCGQKYLTSSVVKLFGPLTRNYYVRAALHFLLSVPAGFLLATILGTVCLAIASVIYLLAAIRGEQWTP  
IEPKKERPQVGGTIKQPPTNPPPRPPAEVRKKPSEGEAAAASAGGPQVNPMPVPTDEVV

>rat-Rn-p22*phox*: GenBank<sup>TM</sup> No. NM\_024160.1

MGQIEWAMWANEQALASGLILITGGIVATAGRFTQWYFGAYSIVAGVLICLLEYPRGKRRKKGSTMER  
CGQKYLTAVVKLFGPLTRNYYVRAVLHLLLSVPAGFLLATILGTVCLAIASVIYLLAAIRGEQWTP  
IEPKKERPQVGGTIKQPPTNPPPRPPAEVRKKPSEAEAAAASAGGPQVNPPIVPTDEVV

>frog-Xt-p22*phox*: Ensembl No. ENSXETG00000017431

MGQIEWAMWANEQALASGLILLAGGIVAVAGQFKGWQFGAYGVAAGVFITLLEYPRSKRKKKGSTM  
ERCGQKYLAAVVKLFGPLTRNYYVRAILHAGLAVPGGFILSTILGTVCLGIASHIYFLAAIRGEEWRPI  
EKQAEPKPRAGETIKRPPENPPPRPPAEVRRKQADEVSVGGGHVNPIPVTDNV

>tetraodon-Tn-p22*phox*: DDBJ<sup>TM</sup> BR000303

MGKIEWAMWANEQALASGFILLAGGIVGVAGRFRGWQFAAYAVAAGVFVCLLEYPRSKRSGKTSVE  
RPGQHCFTVCVKAFGPVTKNYYVRAVLHAAICVPGGFMLATVLCVCLGIASHIYLVAAIRGEHWEP  
ILPKKEIQKPVAESIKNPPQNPPPRPPAETRKRKRVDDLEAAAYDNP

>fugu-Tr-p22*phox*: GenBank<sup>TM</sup> No. AB099895

MGKIEWAMWANEQALASGFILLTGGVVGVAGQFRGWQFAAYAVAAGVLVCLLEYPRSKRSGKTSVE  
RPGQRCFTVCVKAFGPVTNYYVRAVLHAAICVPGGFMLATVLCVCLGIASHIYLVAAIRGEHWEPI  
LPSKEIRKPVAESIKNPPQNPPPRPPADTRKRKRVEDLEAASYDNPISTANE