>NP_003108.2 hyaluronidase PH-20 isoform 1 [Homo sapiens]
MGVLKFKHIFFRSFVKSSGVSQIVFTFLLIPCCLTLNFRAPPVIPNVPFLWAWNAPSEFC
LGKFDEPLDMSLFSFIGSPRINATGQGVTIFYVDRLGYYPYIDSITGVTVNGGIPQKISL
QDHLDKAKKDITFYMPVDNLGMAVIDWEEWRPTWARNWKPKDVYKNRSIELVQQQNVQLS
LTEATEKAKQEFEKAGKDFLVETIKLGKLLRPNHLWGYYLFPDCYNHHYKKPGYNGSCFN
VEIKRNDDLSWLWNESTALYPSIYLNTQQSPVAATLYVRNRVREAIRVSKIPDAKSPLPV
FAYTRIVFTDQVLKFLSQDELVYTFGETVALGASGIVIWGTLSIMRSMKSCLLLDNYMET
ILNPYIINVTLAAKMCSQVLCQEQGVCIRKNWNSSDYLHLNPDNFAIQLEKGGKFTVRGK
PTLEDLEQFSEKFYCSCYSTLSCKEKADVKDTDAVDVCIADGVCIDAFLKPPMETEEPQI
FYNASPSTLSATMFI

>XP_003318802.2 hyaluronidase PH-20 isoform X1 [Pan troglodytes]
MGVLKFKHIFFRSFVKSSGVSQIVFTFLLIPCCLTLNFRAPPVIPNVPFLWAWNAPSEFC
LGKFDEPLDMSLFSFIGSPRINVTGQDVTIFYVDRLGYYPYIDSITGVTVNGGIPQKISL
QDHLDKAKKDITFYMPVDNLGMAVIDWEEWRPTWARNWKPKDVYKNRSIELVQQQNVQLS
LTEATEKAKQEFEKAGKDFLVETIKLGKLLRPNHLWGYYLFPDCYNHHYKKPGYNGSCFN
VEIKRNDDLSWLWNESTALYPSIYLNTQQSPVAATLYVRNRVQEAIRVSKIPDAKSPLPV
FVYTRIVFTDQVLKFLSQDELVYTFGETVALGASGIVIWGTLSIMRSMKSCLLLDNYMET
ILNPYIINVTLAAKMCSQVLCQEQGVCIRKNWNSSDYLHLNPDNFAIQLEKGGKFTVRGK
PTLEDLEQFSEKFYCSCYSTLSCKEKADVKDTDAVDVCIADGVCIDAFLKPPMETEESQI
FYNASPSTLSATMFIVSILFLIISSVASL

>XP_003261317.2 hyaluronidase PH-20 [Nomascus leucogenys]
MGVLKFKHIFFRSFVKSNGISQIVFTFLLIPRCLTLNFRAPPVIPNVPFLWAWNAPSEFC
LGKFDEPLDMSLFSLTGSPRINVTGQGVTIFYVDRLGYYPYIDSITGVTVNGGIPQKISL
QDHLDKAKQDITFYMPVDNLGMAVIDWEEWRPTWARNWKPKDVYKNRSIELVQQQNVQLS
LAEATEKAKQEFEKAGKDFMVETIKLGKLLRPNHLWGYYLFPDCYNHHYKKPGYNGSCFN
VEIKRNDDLSWLWNESTALYPSIYLNTQQSPVAATLYVRNRVREAIRVSKIPDAKSPLPV
FVYARIVFTDQVLKFLSRDELVYTLGETVALGASGIVIWGSLSIVRSMKSCLLLDNYMET
ILNPYIINVTLAAKMCSQVLCQEQGVCIRKDWNSSDYLHLNPDNFAIQLEKGGKFTVRGK
PTPEDLEQFSEKFYCSCYSTLSCKERADVKDTDAVDVCIADGVCIDAFLKPPKETEESQI
FYNASPSTLSATMFIVSILFLIISSVVSL

>XP_001086882.2 hyaluronidase PH-20 [Macaca mulatta]
MGVLKFKHIFFRSFVKSSGVSQIVFTFLLIPCCLTLNFRAPPIIPNVPFLWAWNAPSEFC
LGKFNEPLDMSLFTLMGSPRINITGQGVTIFYVDRLGYYPYIDLTTGVTVHGGIPQKVSL
QDHLDKSKQDILFYMPVDNLGMAVIDWEEWRPTWARNWKPKDVYKNRSIELVQQQNVQLS
LPQATDKAKQEFEKAGKDFMLETIKLGRSLRPNHLWGYYLFPDCYNHHYRKPGYNGSCFD
VEIKRNDDLSWLWNESTALYPSIYLNTQQSVVVATLYVRNRVREAIRVSKIPDAKNPLPV
FVYARLVFTDQVLKFLSREELVSTLGETVALGASGIVIWGSLSITRSMKSCLLLDTYMET
ILNPYIINVTLAAKMCSQVLCQEQGVCIRKDWNSSDYLHLNPDNFDIRLEKGGKFTVHGK
PTVEDLEEFSEKFYCSCYTNLSCKEKADVKDTDAVDVCIADGVCIDASLKPPVETEGSPP
IFYNTSSSTVSTTMFIVIILFLIISSVVSL

>NP_001076141.2 hyaluronidase PH-20 precursor [Oryctolagus cuniculus]
MGVLKFKHIFFGSAVEFNRAFQILYIFLLIPCCLTANFRAPPVIPNVPFLWAWNAPTELC
LGKSGEPLDTSLFSLFGSPSKDKTGQGITIFYVDRLGYYPHIDSKNVSVHGGIPQLGPL
QQHLDKAKKDILYYMPTDNVGLAVIDWEEWRPTWLRNWKPKDIYRIKSIELVQQQNPQIN
LTEATKLAKIEFEKAGKCFMEETLKLGRLFRPNHFWGYYLFPDCYNHNYDKPNYKGICFD
IEKKRNDDLDWLWKESTALFPSVYLKSSLQSSPKAALFVRNRVQEAIRVSEVPNAKSPL

PIFVYTRLVFTDKIFQFLSQDDLVNTIGEIVALGASGIVVWGSHTLARSMKSCLNLDDYM
KNILNPYLINVTLAAKMCNQVLCQEQGVCTRKNWDSNDYLHLNPGNFAIQIGNNGTYKVD
GKPTLTDLEQFSKNFQCSCYTNLNCKERTDMNNVQTVNVCAVENVCIDTNVGPQAVTYAP
KEKKDVAHILSNTTSINSSTTM

>XP_002919069.1 hyaluronidase PH-20 [Ailuropoda melanoleuca]
MAVLRFQRIFFRSFVGSRGATPVVLTFLLIPCCLTQEFRAPPFIPNVSFLWGWNAPTELC
AQKFNVQLDLNLFSLIGSPQKSATGQGITLFYANRLGYYPHIDEKTGKNVNGGIPQSGNL
KKHLEKAKKDIAYYIQTDSIGLAVIDWENWRPIWVRNWKPKDIYKHQSIELVQQHHIELN
VTEATKIAKADFEKAGKCFMQETLKLGKSLRPNYLWGYYLFPDCYNHNYKKPDYNGSCSD
LEKKRNDELNWMWKESTALFPSIYLNTKLKSSPYAALYVRNRVWEAIRISQVSSVKHPL
PIFVYARPVFTDVSLKYLSEDDLVNTIGETVSLGVSGIIMWGSLNLSQNVQSCTELDNYM
TNTLNPYIINVTLAAKMCNQVLCQEQGVCIRKHWNSNDYLHLNPDNFAIQLEKSGRYTVQ
GKPTLEDLQQFSKNFYCSCYANVRCKERVDMTEIHTVKVCVAADVCIDSFL

>NP_999176.1 hyaluronidase PH-20 [Sus scrofa]
MGVQRLQHISFRSFFVPSGAPQVVFTFLLIPCCLALDFRASPIIPNTTFLWVWNAPTESC
AKKFYMPPDLSLFSFVTSPRASVTGQFLTLFYANRLGYYPHVDENTGKNVNGGIPQLGSL
QRHLDKAEKDILHYMQIDKVGLSVIDWENWRPTWERNWKEKAIYRRQSIELVQQKNIKLT
PAAATKLAKREFEKAGKTFMQETLKLGKLLRPNHLWGYYLFPDCYNHNYHKPGYNGSCLD
IEKRRNDALDWLWKESTALFPSIYLNTRLKPSQVALFVRNRVQEAIRVSKVANAQSPLPV
FVYTRPVFSGASSRYLSQDDLVNTIGETVALGASGIVMWGSLNLSLTMQSCMNLGSYLKT
TLNPYLINVTLAAKMCSQVLCQEQGVCTRKHWNSSDYLHLNPANFAIRTGKGNKYIVHGK
PTLEDLKEFSKNFYCSCFANFHCKERADIENIHAINVCITEDVCVEAFL

>XP_002686960.3 hyaluronidase PH-20 [Bos taurus]
MLRHQHISFRNFVGSNGAPQAVFTFLLVPCCLALNFTAPPLIPNIPFLWAWNAPTNHCAE
IFSMPPDLGLFSLVGSPQKDVTGQPITLFYADRLGYYPKINERTGVHKNGGIPQVASLKK
HLDKAEKDIAYYMPIDNVGLAVIDWENWRPTWVRNWKPKDVYKKASIELVLQQNRHFTLK
EATKRAKADFEKAAKSFMQETLKLGKFLRPNHLWGYYLFPDCYNHHYNQANYNGSCFDEE
KRRNDALNWLWKESTALYPSVYLNTKLKSSPQARLFVRNRVQEAIRLSKVANVKSPLPVF
VYTRPVFSDMSSKFLSQDDLVSTIGESIALGASGIIMWGSFNLSLTKQSCMNLSNYLNTI
LNPYIINVTLAAKMCSQVLCHEEGVCTRKHWNSTDYLHLNPMNFAIQRRKYGKYTIHGKP
TLEDLLQFSENFYCSCYANIHCKKRDIKNIHTINVCFAEDVCINASL

>NP_001008413.3 sperm adhesion molecule 1 precursor [Bos taurus]
MRMLRRHHISFRSFAGSSGTPQAVFTFLLLPCCLALDFRAPPLISNTSFLWAWNAPVERC
VNRRFQLPPDLRLFSVKGSPQKSATGQFITLFYADRLGYYPHIDEKTGKTVFGGIPQLGN
LKSHLEKAKNDIAYYIPNDSVGLAVIDWENWRPTWARNWKPKDVYRDESVELVLQKNPQL
SFPEASKIAKVDFETAGKSFMQETLKLGKLLRPNHLWGYYLFPDCYNHNHNQPTYNGNCP
DVEKRRNDDLEWLWKESTALFPSVYLNIRLKSTQNAALYVRNRVQEAIRLSKIASVESPL
PVFVYARPVFTDGSSTYLSQGDLVNSVGEIVSLGASGIIMWGSLNLSLSMQSCMNLGTYL
NTTLNPYIINVTLAAKMCSQVLCHNEGVCTRKHWNSSDYLHLNPMNFAIQTGEGGKYTVP
GTVTLEDLQKFSDTFYCSCYANIHCKKRVDIKNVHSVNVCMAEDICIDSPVKLQPSDHSS
SQEASTTTFSSISPSTTTATV

>XP_003502178.1 hyaluronidase-5-like [Cricetulus griseus]
MRVLCLKHSFSGSFLESNGAPQTVLVFLLLPCCLTGDFRAPPLIPNVPFLWVWNAPTESC
LTKFNEPLDLSLFSLVGSPKKSATGQPITIFYTDRLGFYPHIDDSNKSIHGGVPQLGSL
KSHLEKARDDIQYYMPIDNVGLAVIDWEDWRPTWSRNWKPKDIYKHKSIELVKQQNKQLN

ITEATRRAKKDFEQAARSFMEGTLKLGKSLRPNHLWGFYLFPDCYNNKFHDLNYNGECPD
TEKRRNDGLFWIWKQSTALYPSIYLKTGLKSSQQAVLYVRNRVQEAIRVSKAKDPQSPVP
IFVYSRIVFGDLTYRFLSQKDLVNTIGETVALGASGMVMWGTLGLVRSMKSCLNLHDYLE
NTLNPYLINVTLAAKMCSQTLCQDQGICSRKDWNSDNYLHLSPKNFQIQFVRSGKYEIRG
NPTLDDLQYFSKNFRCSCYSNLNCKERDDLESVSTVSVCAVETACINSFV

>NP_001166492.1 hyaluronidase PH-20 precursor [Cavia porcellus]
MGAFTFKHSFFGSFVECSGVLQTVFIFLLIPCCLADKRAPPLIPNVPLLWVWNAPTEFC
IGGTNQPLDMSFFSIVGTPRKNITGQSITLYYVDRLGYYPYIDPHTGAIVHGGLPQLMNL
QQHLRKSRQDILFYMPTDSVGLAVIDWEEWRPTWTRNWRPKDIYRNKSIELVKSQHPQYN
HSYAVAVAKRDFERTGKAFMLETLKLGKSLRPSSLWGYYLFPDCYNTHFTKPNYDGHCPP
IELQRNNDLQWLWNDSTALYPSVYLTSRVRSSQNGALYVRNRVHESIRVSKLMDDKNPLP
IYVYIRLVFTDQTTTFLELDDLVHSVGEIVPLGVSGIIIWGSLSLTRSLVSCIGLENYMK
GTLLPYLINVTLAAKMCGQVLCKNQGICTRKDWNTNTYLHLNATNFDIELQQNGKFVVHG
KPSLEDLQEFSKNFHCSCYTNVACKDRLDVHNVRSVNVCTANNICIDAVLNFPSLDDDDE
PPI

>NP_001019492.1 hyaluronidase PH-20 [Rattus norvegicus]
MRVLCFKHSFFGSLLESSGLPQTLLVFLLIRCCLTVDFRAPPLIPNVPFLCAWNAPTESC
ATRFNQPLDLSLFSLVGSPRKTAIGHPVTIFYSDRLGLYPHIDEMHTAFHGGIPQLGSL
KSHLEIAKGDIHHYMPIDNVGLAVIDWEDWRPTWSRNWKFKDIYRNKSIEFVQQQNTQLN
LTEAVKRAKQEFEEAARNFMEQTLKLGKLLRPNHLWGFYLFPDCYNNNFQDANYKGDCPD
IEKQRNDALFWIWKESTALYPSIYLKSSLKSSPLAALYVRNRVQEAIRMSKVKDPHNPL
PIFVYFRPVFTDLTFQYLEQDDLVNTIGETVALGASGIVMWGTLNLSQTMKSCMNLHDYL
KTTLNPYIINVTLAAKMCSQTLCQNQGICSRKDWNSNDYLHLSPRNFQIHFIKHGKYEII
GSPTLDDLQYFSKNFRCSCFSNLDCKERVDINHVSRVNVCTLEDICINSLV

>XP_001507937.2 hyaluronidase PH-20 [Ornithorhynchus anatinus]
RLPHLSSGSWAVCCQASWVAVVLQLLPWCMALDIQAPPMIPNLPFLSAWNAPTELCAQKH
DVELDMSLFSLVGSTRQEIKGQNITLFYTDRLGYYPYIDEVTGKSVNTGLPQLCPLDLHL
TKAKEDIVNYMPSAEKSGLAVIDWENWRPLWIRNWKPKDIYRNRSIELVQQKDVTLNFSE
AWNIAKVDFEKAARNFMQQSLKLGKTLRPNRLWGFYLFPDCYNHNYKSPNYNGSCFDIEK
ARNDELQWLWKESTALFPSIYLDTGLRNSGYAPLFVRNRVQEAIRVSKVADPLNPLPIFV
YTRPVFTNAPSNYLSQIDLVNTIGECAALGVSGTVMWGSLNLTRSVKTCRILDNYMRMTL
NPYIINVTLAAKMCSQVLCEERGACVRKAWNSSDYLHLNPANFVIHTTEDGRYLVNGKPT
YADLKQFSKKFTCRCFAGSSCKTVVNVTTTSFIYVCIADDICIEADLNSNLSEEDFS
NSS

>NP_001073344.1 hyaluronidase PH-20 precursor [Mus musculus]
MGELRFKHLFWGSFVESGGTFQTVLIFLLIPCSLTVDYRAAPILSNTTFLWIWNVPTERC
VGNVNDPIDLSFFSLIGSPRKTATGQPVTLFYVDRLGLYPHIDANQAEHYGGIPQRGDY
QAHLRKAKTDIEHYIPDDKLGLAIIDWEEWRPTWLRNWKPKDNYRNKSIELVQSTNPGLS
ITEATQKAIQQFEEAGRKFMEGTLHLGKFLRPNQLWGYYLFPDCYNNKFQDPKYDGQCPA
VEKKRNDNLKWLWKASTGLYPSVYLKKDLKSNRQATLYVRYRVVEAIRVSKVGNASDPVP
IFVYIRLVFTDRTSEYLLEDDLVNTIGEIVALGTSGIIIWDAMSLAQRAAGCPILHKYMQ
TTLNPYIVNVTLAAKMCSQTLCNEKGMCSRRKESSDVYLHLNPSHFDIMLTETGKYEVLG
NPRVGDLEYFSEHFKCSCFSRMTCKETSDVKNVQDVNVCVGDNVCIKAKVEP

>XP_003502177.1 hyaluronidase PH-20 [Cricetulus griseus]
MGGLPLKHLFWGSFVVSRATFQTVLIIFLLIPCSLTVDYRGGPLLPSEILIWVWNVPTEA

CIGNFSHSIDLSLFPIVGSPRKTATGQPVTLFYVDRLGYYPHLDTKLAEHHGGIPQLGN
LKNHLDKSKTDIEHYIPVDKFGLAVIDWEEWRPTWMRNWKPKDVYRNKSIALVQANNAGI
SIEDATQKAKDEFETAGRHFMEETLKLGKSVRPRHLWGYYLFPDCYNNKFQDPKYDGNCP
PVEKQRNDALSWMWKESTGLYPSVYLKKDLGSNRQAALYVRYRVVESVRVSKVRSEKDPV
PIFVYIRLVFTDNTSEYLQEVDLVNTIGEIVALGPAGIIIWDAMSLAQRAPGCPILHQYL
KTTLNPYIINVTLAAKMCSQTLCEEKGVCSKKNESSDVYLHLNPSQFYIELTKTGTYEVH
GYPRVADLQYFSEHFQCSCFTNMDCQETPDIEDIMDVNVCIGDNICIKAEVEP

>XP_002190553.4 hyaluronidase PH-20 [Taeniopygia guttata]
ASGVVFATLLVSCCSSLNIRARPLLSNSPFLSIWNAPTELCTERTGVQLDMNFFPLIGST
LKTSVGQNITLFYPDRIGYYPYKNEITGEAFNGGLPQLSLLENHLKKAREDIQFYIPSDE
QLGLAVIDWENWRPVWIRNWGSKDIYRQESIELVQQRDLSISEAESRTIAKMEFEFAAKS
FMLETLKLGIETKPNRLWGYYLYPDCYNYDYKQNPHNYTGACLDIEIERNNELNWLWEKS
TALYPSIYLETALKSSRNAQLFVRNRVQEAIRTSYVANSSHPLPVFVYTRPVFTDVYEEY
LSEDDLVNTIGESAALGASGIVIWGDMNLTQNKNTCRTLDNYLRRTLTPYLINVTMAARI
CSQVLCQDSGACARKKWNSSDYLHLNPENIAIQMTKDGKYTLQGQPSYQDLQTFIEKFDC
HCYAGHSCEPRADINDIHYLHACISEDICI

>XP_002932242.3 hyaluronidase PH-20 [Xenopus tropicalis]
MERVNCEHILYKKLLCILCSFLIHTCQSMDMKAPTNGPANFMAIWNAPTELC
MRKFKVNIDISLFQITGSPESSTIAQNITIFYTDRLGYYPSINETNGKITNGGIPQLTNM
DFHLKKVKEDIEYYLPYSKQNGLAVIDWEDWRPIWIRNWASKAVYKMNSIEFARQMDITM
THKKAALIAEAQFESAAQNFMLQTLRLGKAMRPNYLWGFYLFPNCYNYHYKSNPKQYKGH
CPEVEIQRNNKLHWLWKESTALFPNVYLEVALKSSNNAVMFARHRIQEARRLSSLSKF
TLPIYVYTRPVFTDQPDKFLSEVDLANVIGEIAALGADGFVMWGEIKNMTQSKKTCTDLN
SYLVKILNPYIINVTLAAKLCSHVLCQDNGLCTRKNWNTNTYLHLNSNTLAIEQKNGKY
TIKGHATHEDLTYFSKHFQCHCNAGRKCKETFNLKNIGLVNVCLPNSNICVKA

>NP_001082194.1 sperm adhesion molecule 1 (PH-20 hyaluronidase, zona pellucida
binding) L homeolog [Xenopus laevis]
FQHVLCKKCICILLFCFITSCQSMDIKAPTNGLSNFMAIWNAPTELCLQKF
KVKIDVSLFQIVGTTFNSSIAQNITIFYTDRLGHYPSINETNGKISKGGIPQLTNMAFHL
KKAKEDIEYYLPSSKQHGLAVIDWEEWRPLYTRNWASKAVYKKQSIEFAQQMDITMTHKK
AVGIAAAQFESAAKNLMLETLKLGKTMRPNYLWGFYLFPNCYNYHYKSNPKQYTGHCPKL
EIQRNDKLHWLWKESTALFPNIYLEVALKSSSNAALFARHRIQEARRLSTFSKYAVPI
YVYTRPVFTNRPDEFLSEVDLANVIGEIAALGADGFVMWGDVINMTQSKKACTDLNSYLL
KILNPYIINVTLAAKLCSHVLCQDNGLCTRKHWDTNTYLHLNSKTLAIEQKNGKYTVEG
NPTYEDLTYFSKNFKCLCYAGRTCKELIHLQIIGLVNICLPKSNICIKA

>XP_002919077.1 hyaluronidase-4 [Ailuropoda melanoleuca]
MKVLSEGQLRFCVVQPIHLTSCLVIFIILKSISSLKPARLPIYQRKPFIAAWNAPTDQC
LIKYNIGLNLKMFQVIGSPLAKARGQNVTIFYVNRLGYYPWYTSQGVPINGGLPQNISL
QVHLEKADQDINYYIPAEDFSGLAVIDWEYWRPQWARNWNTKDVYRQKSRKLISDMQENI
SATDIEDLAKETFEESAKAFMKETIELGMKSRPKGLWGYYLYPDCHNYNVYAPNYTGSCP
EEEVLRNNELSWLWNSSTALYPSIGVRKSLGDNENILRFSQFRVHESMRISTMTSHDYAL
PVFVYTRLGYRNEPLFFLSKQDLISTIGESAALGAAGIVIWGDMNLTSSEGNCTKVKQYV
SSDLGSYIVNVTKAAEVCSLHLCRRNGRCRRKVWKAPDYLHLNPASYHIEASQDGEFTVQ
GKASDTDLKAMEEKFSCHCYQGYEGADCRGKKTADGC

>XP_002712114.1 hyaluronidase-4 [Oryctolagus cuniculus]

PIYQRKPFIAAWNAPTDQCLMKYNLKLNLKMFQVIGSPLAKARGQNVTIFYVNRLGYYPW
YTSEGVPINGGLPQNISLQVHLEKADQDINYYIPAKDFSGLAVIDWEYWRPQWARNWNT
KDVYRQKSRKLISDMQANVSATDIEYLAKATFEESAKAFMKETLKLGIKSRPKGLWGYYL
YPDCHNYNIYAPNYTGSCPEEEVLRNNELSWLWNSSAALYPSIGVRKALGDSENILRFSQ
FRVHESLRVSTMTSHNCSLPVFVYTRLGYRDEPLFFLSKQDLISTIGESAALGAAGIVIW
GDMNLTSSKGNCTKVKQFVGSDLGRYIVNVTRAAEVCSLHLCRNNGRCIRKMWRAPDYLH
LNPASFHIAASEDGEFIVKGKVSDTDLAVMAEKFSCHCYQGYEGADCREMKTVDGC

>XP_532444.4 LOW QUALITY PROTEIN: hyaluronidase-4 [Canis lupus familiaris]
LLIFFILKSISSLKPARLPIYQRKPFIAAWNAPTDQCLIKYNIGLNLKMFQVIGSPLAKA
RGQNITIFYVNRLGYYPWYTSQGVPINGGLPQNISLQVHLEKADQDINYYIPAEDFNGL
AVIDWEYWRPQWARNWNTKDVYRQKSRKLISDMQENVSATDIEYLAKATFEESAKAFMKE
TIELGIKSRPKGLWGYYLYPDCHNYNVYAPNYTGSCPEEEVLRNNELSWLWNSSAALYPS
IGVRKSLEDNENILRFSRFRVHESLRISTMTSHDYALPIFVYTRLGYRNEPLFFLSKQDL
ISTIGESAALGAAGIVIWGDMNLTSSEGNCTKVKQYVSSDLGHYIVNVTRAAEVCSIHLC
RSNGRCIRKVWKAPDYLHLNPASYHIEASKDGEFIVKGKASDMDLEALEESFSCHCYQGY
EGADCRGTKTADGC

>XP_002818436.2 hyaluronidase-4 [Pongo abelii]
PIYQRKPFIAAWNAPTDQCLIKYNLRLNLKIFPVIGSPLAKARGQNVTIFYVNRLGYYPW
YTSQGVPINGGLPQNISLQAHLEKADQDINYYIPAEDFSGLAVIDWEYWRPQWARNWNA
KDVYRQKSRKLISDMGKNVSATDIEYLAKVTFEESAKAFMKETIKLGIKSRPKGLWGYYL
YPDCHNYNVYAPNYTGSCPEDEVLRNNELSWLWNSSAALYPSIGVWKSLGDSENILRFSK
FRVHESMRISTMTSHDYALPVFVYTRLGYRDEPLFFLSKQDLVSTIGESAALGAAGIVIW
GDMNLTSSKANCTKVKQFVSSDLGSYIANVTRAAEVCSLHLCRNNGRCIRKMWNAPSYLH
LNPTSYHIEAAEDGEFTVKGKASDTDLAVMADTFSCHCYQGYEGADCRETKTADGC

>NP_084124.1 hyaluronidase-4 [Mus musculus]
PVYQRKPFIAAWNAPTDLCLIKYNLTLNLKVFQMVGSPRLKDRGQNVVIFYANRLGYYPW
YTSEGVPINGGLPQNTSLQVHLKKAAQDINYYIPSENFSGLAVIDWEYWRPQWARNWNT
KDIYRQKSRTLISDMKENISAADIEYSAKATFEKSAKAFMEETIKLGSKSRPKGLWGYYL
YPDCHNYNVYATNYTGSCPEEEVLRNNDLSWLWNSSTALYPAVSIRKSFADSENTLHFSR
FRVRESLRISTMTSQDYALPVFVYTQLGYKEEPLLFLSKQDLISTIGESAALGAAGIVVW
GDMNLTSSEENCTKVNRFVNSDFGSYIINVTRAAEVCSRHLCKNNGRCVRKTWKAAHYLH
LNPASYHIEASEDGEFIVRGRASDTDLAVMAENFLCHCYEGYEGADCRE

>XP_003134772.2 hyaluronidase-4 isoform X2 [Sus scrofa]
LLIFFILKSISSLKPARLPVYQRKPFIAAWNAPTDQCLIKYNVRLNLKMFQVIGSPLARA
RGQNVTIFYVNRLGYYPWYTAQGVPINGGLPQNISLQVHLEKADQDINYYIPSEDFSGL
AVIDWEYWRPQWARNWNTKDVYRQKSRKLISELQENVSMADIEYLAKTTFEESAKAFMKE
TIELGIKSRPKGLWGYYLYPDCHNYNVYAPNYTGSCPEEEVLRNNELSWLWNSSAALYPS
ISVRKSLGDSENTLRFSQFRVHESMRISTVTSHGYALPVFVYTRLGYRDQPLFFLSKQDL
ISTIGESAALGAAGFVIWGDMNLTSSEGNCTKVKQFVSSDLGHYVVNVTRAAEVCSLHLC
RNNGRCLRKVWKAPDYLHLNPASYRIEASEDGEFTVKGRASDRDLAVLVERFSCHCYQGY
EGTDCREMKRADGC

>NP_036401.2 hyaluronidase-4 [Homo sapiens]
PIYQRKPFIAAWNAPTDQCLIKYNLRLNLKMFPVIGSPLAKARGQNVTIFYVNRLGYYPW
YTSQGVPINGGLPQNISLQVHLEKADQDINYYIPAEDFSGLAVIDWEYWRPQWARNWNS
KDVYRQKSRKLISDMGKNVSATDIEYLAKVTFEESAKAFMKETIKLGIKSRPKGLWGYYL

YPDCHNYNVYAPNYSGSCPEDEVLRNNELSWLWNSSAALYPSIGVWKSLGDSENILRFSK
FRVHESMRISTMTSHDYALPVFVYTRLGYRDEPLFFLSKQDLVSTIGESAALGAAGIVIW
GDMNLTASKANCTKVKQFVSSDLGSYIANVTRAAEVCSLHLCRNNGRCIRKMWNAPSYLH
LNPASYHIEASEDGEFTVKGKASDTDLAVMADTFSCHCYQGYEGADCREIKTADGC

>XP_003261316.2 hyaluronidase-4 [Nomascus leucogenys]
MKVLSEGHLRLCVVQPVHLTSWLLIFFILKSISCLKPAQLPIYQRKPFIAAWNAPTDQC
LIKYNLRLNLKMFPVIGSPLAKARGQNVTIFYVNRLGYYPWYTSQGVPINGGLPQNISL
QVHLEKADQDINYYIPSEDFSGLAVIDWEYWRPQWARNWNAKDVYRQKSRKLISDMGRNV
SATDIEYLAKVTFEESAKAFMKETIKLGIKSRPKGLWGYYLYPDCHNYNVYAPNYTGSCP
EEEVLRNNELSWLWNSSAALYPSIGVWKSLGDSENILRFSKFRVHESMRISTMTSHDYAL
PVFVYTRLGYRDEPLFFLSKQDLVSTIGESAALGAAGIVIWGDMNLTSSKANCTKVKQFV
NSDLGSYIANVTRAAEVCSLHLCRNNGRCIRKMWNAPSYLHLNPASYHIEASEDGEFTVK
GKASDTDLAVMADTFSCHCYQGYEGPDCREIKTADGC

>XP_003407292.1 hyaluronidase-4 [Loxodonta africana]
SSWLLIFFILKSISSLKPARLPIYQRKPFIAAWNAPTDQCLIKYNIRLNLKMFQVVGSPL
AKARGQNVTIFYVNRLGYYPWYTSQGVPINGGLPQNISLQVHLEKADQDINYYIPAEDF
SGLAVIDWEYWRPQWARNWNAKNVYRQKSRKLISETQENVSATDIEYLAKATFEESAKAF
MKETIKLGIKSRPKGLWGYYLYPDCHNYNVYAPNYTGSCPEEEVLRNNELSWLWNSSAAL
YPSIGVRKSLGDSENILHFSQFRVHESMRVSAMTSHDYTLPVFVYTRLGYRDQPLFFLSK
QDLISTIGESAALGAAGIVIWGDLNLTSSEGNCTKVKQFVSSDLGYYIVNVTGAAEVCSR
HLCGNNGRCVRRRWKAPDYLHLNPASYHIRASEDGDITVTGAASDTDLEVMAEKFSCHCY
QGYKGADCRAMKTPDG

>XP_003586042.1 hyaluronidase-4 [Bos taurus]
LFILFILKSISSLKPARLPVYQRKPFIAAWNAPTDQCLIKYNIRLNLKMFQVIGSPLARA
RGQNVTIFYVNRLGYYPWYTPQGVPINGGLPQNISLQVHLEKADQDIRYYIPSEDFSGL
AVIDWEYWRPQWARNWNTKDIYRQKSRKLISETQENASAADIEYLAKATFEESAKAFMKE
TIELGIKSRPKGLWGYYLYPDCHNYNVYGPNYTGSCPEEEVLRNNELSWLWNISAALYPS
IGVRRSLGDSENVLRFSQFRVHESMRISIMTSRDHALPVFVYTRLGYRDQPLLFLSKQDL
ISTIGESAALGAAGIVIWGDMNLTSSKGNCTKVKQFVSSDLGSYIVNVTRAAEVCSLHVC
RNNGRCIRKVWKMPDYLHLNPASYHIEASEDGEFTVKGRASDTDLAVLAERFSCHCYQGY
QGADCREMKTADGC

>NP_001094250.1 hyaluronidase-4 [Rattus norvegicus]
RCVVQPVHLTSGLLIFFILKSISSLKPARLPVYQRKPFIAAWNAPTDLCLIKYNLAVNLK
VFQMVGSPRLKDRRQNVVIFYANKLGSYPWYTSEGVPINGGLPQNTSLQVHLEKAYQDI
NYYIPSENFSGLAVIDWEYWRPQWARNWNTKDIYRQKSRTLISDMKENISTADIEYLAKA
TFEKSAKAFMEETIKLGIKSRPKGFWGYYLYPDCHNYNFYATNYTGSCPEEEVLRNNDLS
WLWNSSTALYPAVSIRKSFADSENTLHFSQFRVRESLRISTMTSHDYALPVFVYTRLGYK
EEPLLFLSKQDLISTIGESAALGAAGIVVWGDMNLTSSAENCTKVNRFVNSDFGSYVINV
TTAAEVCSRHLCKNNGRCARKTWKAAHYLHLNPASYHIEASADREFVVKGRASDADLAAM
AENFLCHCYEGYEGADCRD

>XP_003221368.2 hyaluronidase-4 [Anolis carolinensis]
PISRRKPFIAAWNAPTDHCSIRYNVTINLKMFHVIGSPFAKARGQNVTIFYVNRLGYYPW
YTSQDVPVNGGLPQNFSLQTHLEKASEDINYYIPDEDFTGLAVIDWEHWRPQWERNWNT
KNIYRRQSRKLISAMQQNVSTNALEHLAKFSFEQCAKAFMKETIELGIKSRPKGLWGYYL
YPDCHNYNFHDQNYTGSCPESEVLRNNELSWLWNSSAALYPSIGIKKFLGNSENILRFSQ

FRVNESIRISFMTSHDYALPVFVYTRLDYRDEPLLFLSTQDLVSTIGESAALGAAGI
VIWGDMNLTSSEVNCTKVKQFIASELGVYIVNVTKAAEVCSWHLCQNNGRCIRRNWKALN
YLHLNPRNFQIEISEDQGFTVRGEASSADLQIMTEKFTCHCYQGFEGENCKKIQTVDG

>XP_003475093.1 hyaluronidase-4 [Cavia porcellus]
IQSIHLTPWLLVFLSLKSVCSLKPARLPLYQRKPFIAAWNTPTDQCLMKYKLRLNLEMFQ
VAGSTLTKARGQNVTIFYPRRLGYYPWYTSQGVPINGGLPQNTSLKVHLKKVDQDIKYY
IPVKDFRGLAVIDWEYWRPQWDRNWNAKDVYRRKSKELIFDLQQNVKASDIEYLAKAT
FEESAKAFMIETIKLGIKRRPKGLWGYYLYPDCHNYNMDDPSYTGSCPEEEVLKNNELSW
LWDSSTALYPSVVIKKSLRNSENVLHFSKFRVQEAMRISTMTSHKYALPVFVYTRLGYRE
DPLFFLSQQDLINTIGESAALGAAGIVIWGDMNLTLSEDNCTKVKQFVSSDLGSYIVNVS
TAAEICSLHLCRSNGRCVRKMWNASDYLHLSNKSYRIETSGNGGFTAKGNVSDADLIVMK
QKFFCQCYQGHEGANCQEMKEVDGSTGLSSC

>NP_001090796.1 hyaluronidase-4 [Xenopus tropicalis]
PFIQNKPFLAVWNAPTEQCKQRYKVDLDLSIFDIVANPNETLIGSNVTIFYHTHLGHYPY
FTDEGEPVNGGVPQNESLKKHLNKSEHDINRLIPNLDFKGLGVVDWENWRPQWDRNWGS
KLIYRNKSIELVKNHHPTWSDEQLKKKAKEEFDNAAKEFMTKTIALAQEKRSKGLWGYYL
FPDCYNYDYKENPQSYTGRCPDIEMTRNDLLKWLWKESNALYPSIYLDYVLKSSPNVLKF
VHHRVKESMRVASMARKDYSLPVFVYSRPFYSYTLYTLSEADLIYTIGESAALGAAGIV
LWGGMQYASTKESCITVKKYIDGPLGHYLVNVTAAAKMCSKVLCKKNGRCLRNNIDSPDY
LHLNPNHFKIKKHFSGKGFFATGKPGWEDIHYMEQRFMCQCY

>XP_003221369.1 hyaluronidase [Anolis carolinensis]
PLFPNKAFVVVWNAPTEQCRLRYDVDLDLNVFNVLSNPNETLSGPTVTIFYHTRLGYYPY
FNDNGDSINGGIPQNQSIIKHLNKAKSDIDHFITMKKFQGLGVIDWENWRPQWDRNWGN
KTIYKNKSLELVRKRHPHWPKNAVHKAAKEEFENAGKNFMNSTLSLAENMRPSGLWGYYL
YPDCYNYDYKTDSNTYTGKCPDIASSRNDLLLWLWKESTALYPSIYLDKRLKSSPNSLKF
VHYRVKEAIRIASIARKDYALPVFVYSRPFYAYTFQALTEIDLVHTIGESAALGAAGVV
LWGSIQYANSYENCLTVKKYIDGPLGHYIMNVTSAAKLCSKVLCKKNGRCIRKNSESFDY
LHLHPQSFKIRFSKTANKVSVVGKMKRKDKKAMKEKFMCQCYQGWTGK

>XP_003449274.1 hyaluronidase-4 [Oreochromis niloticus]
PLIGRKPFIAAWNAPLDLCTFRYNITTNVNHLFHIQGSPRADWTGQNVTIFYANRLGYYP
HYTPHGKAVFGGLPQNCSLDRHLFKAYQDINHFIPAEDFRGLAVIDWEFWRPQWSRNWH
KKDIYRRKSKELTKKAYINVTAAQVEELARRRFEKSAKIFMLKTIQLGRQLRPSALWGFY
LYPDCHNYNLHDQNYTGFCPLLERLRNDELVWLWNSSMALYPSVTIRKHHSNSISNLHFT
QHRIRESLRVASLTSKEYDLPTYVYLRLGYRDEALNFLTTDDLIHTIGESAALGAAGFVI
WGDLNLTSSRHNCTHVKSFLSHRLGLYITNVTRAAEICSEFLCQSNGRCVRRDPHARHYL
HLSADSYRIHPSGDGDFAVNGWHSPHEQQLLMERFRCHCYEGHNGENCDSINKV
REDKGPWEEEE

>NP_001074140.1 hyaluronoglucosaminidase 6 [Danio rerio]
PLLPHRPFVVVWNAPTESCRLRFKVDLDLSVFDIVANHNETLSGPNVTIFYHSHLGYYPY
YTSSETPINGGLPQNQSLSKHLSKARADIDKLIPIKDFHGLGVIDWENWRPQWVRNWGS
KDIYRNKSKELIRKLHPGWPQSKVENEAKEVFERAGQVFMNSTLLLAESRRPHGLWGFYL
FPDCYNYGYKQHPFRYTGECPNIEHVRNDHLMWLWKESTALYPSIYLDCELKSSTNTVKF
VHYRVKEAMRIASIARNDYTLPVFVYSRPFYAYTFVVLSESDLVHTIGESAALGAAGVV
LWGSSEYARSQRNCLTVKKYIDGPLGHYVINVTSAAKLCSKALCKKNGKCVRKSLDSGAY
LHLNPRFFNIRLNQGIRGPCFYVSGHLNNLDILDMKQKFTCQCY

>XP_003217669.1 hyaluronidase-2 [Anolis carolinensis]
PIFTRRPFIVAWNVPSQDCQPRFKVQLDFSIFDLQASPNEGFVDQNLTIFYKERLGLYPY
YNAQKVAVNGGVPQNSSLEEHLARLAVSISRYIRSEIKEGLAVIDWEEWRPIWIRNWQP
KDIYRIASRQLVLSRHVELSEDQVKKKAQYEFESSASSFMKETLRVAKSFRPQQLWGYYL
FPDCYNHDYSKNLDSYTGHCPDVEKTRNDHLAWLWKESTALYPSIYLEEVLANSINGRKF
VRSRVQEALRISRQHHDDYDLPVFVYTRPTYNRRQNLTYLSEMDLISTIGESAALGAAGA
IFWGDAEDTKSRETCQVLKNYMKENLGRYIVNVTTAADLCSQSQCNGHGRCRRRQNDANV
FLHLNPTSFQILHNDPGSQAPLLEARGKLSQEDIDFLQHNFQCHCYQGWRGEGCEEQ

>XP_001507903.3 hyaluronidase-4 [Ornithorhynchus anatinus]
LSWLLISFLLELTSSLKPAQHPIFQKKPFVAVWNAPTDQCLFQYNTGINLRTFHITGSP
LAKARGQNVTIFFVNRLGYYPWYNAQEDPINGGLPQNASLQTHLIKANQDIRHYISAED
FRGLAMIEWEYWRPQWSCNWNAKDVYRRNSRQLISERLRNLSDNSLEHSAKVSFEESAKA
FMKETIELGMRNRPRALWGYYLYPDCHSYNFHEQNYTGSCPEDEVLRNNELFWLWNSSAA
LYPSISVQKALRNSKNLWLFSWFRVNESLRISTMMSCDYALPVFVYTRLGYRDAPLTFLS
KHDLISTIGESAALGAAGIVIWGDMNLTSSEGNCTKVKKFVTSHLGNYLINVTTAAEECS
RHHCGNNGRCTRKAWNAHDYLHLNPQSYYIEASENEEFMVKGKASGTDSEVMEEKFSCHC
Y

>XP_003449275.2 hyaluronidase [Oreochromis niloticus]
PPLIPHKPFVVVWNAPTESCRLRFKVDLDLSIFDIVANLNETLSGPNVTIFYHSHLGYYP
YYSNSGIPINGGLPQNQSISKHLGKARSDIDKLIPHKDFRGLGVIDWENWRPQWVRNWG
SKDIYRKRSREQIRKLHPNWPESKVEKEAKEGFERAGQAFMNLTLALAQGRRPGGLWGFY
LFPDCYNYGYKQHPQHYTGECPNVEHVRNDHLIWLWKESSALYPSIYLDYELKSSSNTVK
FVHYRVKEAMRIASIARTDFTLPVFVYSRPFYAYTFVVLSESDLIHTIGESAALGASGV
VLWGSSEYARSQRNCLTVKKYINGPLGHYVINVTSAAKLCSKALCKKNGRCIRKSLDSDT
YLHLNSRFFHIHHNSAPSGPRFHISGHLNNHDILDMKQKFTCQCY

>XP_001378617.3 hyaluronidase-2 [Monodelphis domestica]
APPIFTRRPFLVAWNAPTQDCWPRFRVSLNFSVFDVKASPNEGFVNQNLTIFYRDRLGYY
PYHDSHLRPVHGGVPQNSSLMEHLERLPEGVRHYIRSPDREGLAVIDWEDWRPVWIRNW
QSKDVYRKVSRQLVSLRHPTWSQEQVGKQAQYEFEFAARQFMLETLRWAKETRPRQLWGF
YLFPDCYNHDYVQNWSSYTGRCPDVEVSRNDQLAWLWAESSALYPSIYLDPMLKSSSNCR
KFVRSRVEEALRVAREHHAGYSLPVFVYTRPTYTQSFTVLSEMDLISTIGESAALGAAG
IIFWGDAYYTKSPETCQKIKEYLESRLAPYLVNVSEAALRCSQDLCHGHGRCYRRQPGSN
AFLHLNPQSFRLRPAESPEEPLFRAEGQFSPNDLAQLREHFQCQCY

>XP_003210019.2 hyaluronidase-2, partial [Meleagris gallopavo]
AAPLLTRRPFLVAWNAPTQDCKPRFQVALDFSIFDLHASPNEGFVDQNLTIFYKERLGLY
PYYNKRWEPVNGGVPQQSSLAEHLARLQEGIGKYIRSATSEGLAVIDWEEWRPIWMRNW
KPKDVYQEVSRELVKQKQPFWSPEEVNKQAVFEFESAARQFMVRTLRYAKSFRPKQLWGY
YLFPDCYNHDYSKNKESYTGQCPDVEKTRNDQLAWLWNESLALYPSIYLDPLLAST
PNSRKFVRARVMEAMRISQQHHEGYSLPVFVYTRPTYSRKMDVLSQPDLISTIGESAAL
GAAGVIFWGDVEYTKNRESCQTIKDYMEGDLGRYIVNVTTAAQHCSTTLCQGQGRCLRKN
STANVFLHLNPATFQLQHRDKEQPERPLIWAKGHLSHTDIHFLQIHFRCHCYQGWQGNSC
QQPA

>XP_414258.3 hyaluronidase-2 isoform X1 [Gallus gallus]
LVPAVLAVLARQSPEKPSAAPLLTRRPFLVAWNAPTQDCKPRFQVALDFSVFDLQASPNE

GFVDQNLTIFYKERLGLYPYYNKQGKPVNGGVPQKSSLAEHLARLQENIGKYIRSATSE
GLAVIDWEEWRPIWMRNWKPKDVYQEVSRELVEQRQPFWSPEKVNKQAVFEFESAARHFM
VTTLRYAKSFRPKQLWGYYLFPDCYNHDYSKNKESYTGQCPDVEKTRNDQLAWLWNESMA
LYPSIYLDPLLASTPNSRKFVRARVMEAMRISQQHHEGYSLPVFVYTRPTYSRKM
DVLSQPDLISTIGESAALGAAGVIFWGDVEYTKNRESCQTIKDYMEGDLGRYIVNVTTAA
QHCSITLCHGQGRCKRRNSTANVFLHLNPATFQLQRRDEEQPQRPLIWAKGHLSHTDVHF
LQTHFRCHCYQGWQGNSCQQSA

>NP_001080777.1 hyaluronidase 2 S homeolog precursor [Xenopus laevis]
PVFTRRPFIIAWNAPTQDCPPRFNVHLDLKLFDLNASPNEGFVDQNLTIFYKERLGMYPY
YDEHGAPVSGGLPQNASLRAHLDKLPDGIQKYIRSRDKDGLAVIDWEEWRPIWVRNWQN
KNVYRNNSRNLVASRHPSWPREQVEKEALYDFENAAREFMMETLRHAKNYRPRQLWGFYL
FPDCYNHDYNKNRDSYTGHCPDVEISRNDQLSWLWEESTALYPSIYLDQILASSENGRKF
VRSRVREAMRISYRHHKDYSLPVFVYTRPTYIRKLDFLSQMDLISTIGESAAQGAAGVI
FWGDAEYTKSKETCQMIKRYLEEDLGRYIVNVTTAAELCSQSLCNGNGRCLRQDNITDAF
LHLNSANFQIVSAPKDSQGPSLRAEGKLSAEDIAVLRSQFRCQCY

>NP_001119986.1 hyaluronidase-2 precursor [Xenopus tropicalis]
LSFLPAFLWLFLGAAANGQLSDSWLNKPTFRPVFTRRPFIIAWNAPTQDCPPR
FNVHLDLKLFDLNASPNEGFVDQNLTIFYKERLGMYPYYDEHLAPVAGGLPQNASLRAH
LDKLPEGIQKYIRSRDKDGLAVIDWEEWRPIWVRNWQNKDVYRQNSRNLVSSRHPTWPRE
KVDKEALYEFENAAREFMTETLRHAKNYRPRQLWGFYLFPDCYNHDYVKNRDSYTGQCPD
VEISRNDQLSWLWEESTALYPSIYLDQILASSENGRKFVRSRVREAMRISYRHHKDYSLP
VFVYTRPTYIRKLDFLSQMDLISTIGESAAQGAAGVIFWGDAEYTKSKETCQMIKKYLD
EDLGHYIVNVTTAAELCSQSLCNGNGRCLRQENNTDAFLHLNPANFQIVSAPKDFQGPSL
RAEGKLSAGDIATLRSQFRCQCY

>XP_003221370.3 hyaluronidase-1 [Anolis carolinensis]
FMLVDGSTAMPTRAPLFSKKAFVVVWNAPTEQCRLRYSVDLDLKIFNILSNPNESLNGP
IVTIFYANRLGFYPHFNDSGDSVNGGIPQKESIIMHLIKASLDIDHSITMKTFQGLGVI
DWENWRPQWDRAWGRKNIYRDASLELVRKRHPHWPEDAIKKTARKEFENAGRNFMTTTLS
LVKKLRPNGLWGYYLYPDCYNYDYKIKNKIYTGKCPDLEYSRNDLLFWLWKASTALFPSI
YLEYMLKSSTNALKFVHYRVKEAMRIASIARKDYALPVFVYSRPFYAYTFEPLSEIDLV
HTIGESAALGAAGVILWGSMQYASTYKNCLTVKKYIDGPFGHYIVNVTTAANLCSEVLCT
KNGRCIRKDSESFDYLHLNPRSFKIRYSKTMKKVYVAGSMKREDKEAMEEKFMCQCYQGW
S

>XP_003448364.1 hyaluronidase-2 [Oreochromis niloticus]
LLIVPLWDCLFALGLKPTRWPLYSRKPLLLAWNAPIEDCAPRHKIRFQLDQFQIVATPNE
GFVNQNLTIFYKERLGLYPYFEQDETPVNGGLPQVASRTRHLEKMPEDVKKYIRSEWAT
GLAVIDWEDWRPLWIRNWEPKHIYRRHSEELVRQKNPTWTSDRVKRVAQQEFEMSARLFM
LDTLKQAKNLRPNQLWGFYLFPDCYNHNYMHTLESYTGRCPDVEESRNDQLKWLWTESTA
LFPSIYMSSLLRSSASGRQFVRNRVKEGMRLASSGDGLARPVFVYTRPTYMNSLEQLT
ETDLVSTIGESVALGAAGIIMWGDIAYAHNKTTCSDLDKYLRGTLNQYLLNVSTAAELCS
QTLCGSHGRCLRRNPNSDVYLHLNPLTHGIVEKNGKLTVTGELGKAGGLGFEADFQCQC
YS

>XP_002189602.4 hyaluronidase-1 [Taeniopygia guttata]
PVLVNRPFVTIWNIPTERCAEKYNVSLSLEVFDVLANDQQSFTGQDITLFYSDKIGLFPY
YTSGGVPVNGGLPQNASLEAHIQQATQDIKVTLHSPDYSGLAVIDWEKWRPLWIRNWD

SMEIYRQKSEELVQQQHPQWPPKEVEEMAKQQFEKSACDFMNKTLWLGKSLRPSAYWGFY
GFPDCYNNDFDSLPYNGTCPDVEQQRNQNLSWLWRGSQALYPSIYLPLCLNGTNKVLAYV
RHRVAEAFAVQQGILDSGIPVLPYSQIAFERTLDFLSQEDLMNTIGESAAQGAAGII
LWGSLDYSTSKEMCLRLKDYVEGPLGHYIVNVTASADLCSQTLCSGRGRCVRQDKQQGY
LHLDPSRFTIDLRAGKPWLVAQSLEPGEDISRLAKEFSCQCY

>NP_001074154.2 hyaluronidase PH-20 precursor [Danio rerio]
PFVLLWNAPISKCHQLKVPLDLSLFQAVTTPARVHNQSLSLFYKTRLGLFPYVDLHSM
KEYNGGIPQRGNLSASLEKAKEEFLQFIPDSSSGLAVMDWEEWLPIFDRNFDLKKIYMEL
SINYTLEQNSSLSPQQAATEAKQQFQKEARRFMEETLKKGINLRPRYLWGYYLFPDCYNY
GFDESNYTGTCSEYTKQLNNELLWLWEVSTALYPSAYLPVSKSGSKSAALFVRHQVEEAM
RVASLPKHVHTAPVYVYLRPLLTNQKKLYMNEIDLVSSIGESAALGASGAVLWGSSADYN
DKTSCEALSAYLSDKLNPYILNVTTAAHLCSKNLCQGEGRCVRKNNNSDDFLHISSESHH
IGRNAGKYVVTGTPSASDLADWKSKFTCQCYEDRNC

>XP_003448436.2 hyaluronidase-1 isoform X1 [Oreochromis niloticus]
VLLHLILISLVSGLHYPNSPFSKVPFLTVWNAPSANCLSQYGVDLDLGMFNIVQNQNQT
FMGQNITIFYAEKLGLYPRYSHQGEAINGGVPQNSSLDKHLKVARENVNTYIPDRGFPG
LGVVDWESWRPEWERNWDTKKIYQEGSKALVRSKHPDWSPKQVDDAARVEFNKAARNFME
ETLKLGQAARPDGLWGYYGFPNCYNYYSNKSTGYTGECPPVELKRNDKLLWLWSTSSALY
PDIYLSIQMQSLSREVLLYCHHRILEAMRAADQVTPFAPPVYAYARIVYTYTLEFL
SQEHLVYTIGESAALGSAGVVLWGDHALSKTQATCAAVKSYIDNTLGPYLVNVTSAATLC
SQIMCSSHGRCQRKDPQSKAYLHLDPASWKVVSKRKPNGWRKYKVLGRLQPRHVKLMESE
FQCRCYAGWRGQSCSE

>XP_002813763.3 hyaluronidase-2 [Pongo abelii]
LAVAWAMELKPTAPPIFTGRPFVVAWDVPTQDCGPRLKVPLDLNAFDVQASPNEGFVNQN
ITIFYRDRLGLYPRFDSAGRSVHGGVPQNVSLWAHRKMLQKRVEHYIRTQESVGLAVID
WEDWRPVWVRNWQDKDVYRRSSRQLVASRHPDWPPDRIVKQAQYEFEFAAQQFMLETLRY
VKAVRPRHLWGFYLFPDCYNHDYVQNWESYTGRCPDVEVARNDQLAWLWAESTALFPSVY
LDETLASSRHGRNFVSFRVQEALRVARTHHANHALPVYVFTRPTYSRRLTGLSEMDLIS
TIGESAALGAAGVILWGDAGYTTSTETCQYLKDYLTRLLVPYVVNVSWATQYCSRAQCHG
HGRCVRRNPSASTFLHLSTNSFRLVPGRAPGEPQLRPVGELSWADLDHLQTHFRCQCYLG
WSGEQ

>XP_002935681.1 hyaluronidase-1 [Xenopus tropicalis]
YTFLLSGLLGWLAAGTDPVLKGRPFASVWNAPTSPCLDRFGVTLDLSAFDIVLNQNHTFQ
GSEVVIFYSSQLGFYPYYDESLSPVNGGLPQNNSLRDHLDKAFMDLLETISHPGFNGV
AVVDWESWRPLWARNWDKMRVYQQSSQDLVKEFYPHLPPDKVIELAKAEFETAARKLMQS
TLELGRALRPKGLWGFYGFPSCYNYGYKKKNYGQNYTGECPIEEIHRNDNLTWLWEASQA
LYPDIYLEQALKMSEHVGPYVKHRVLEGIRVAKDLPVLPYARIVYTYSMDFLT
QEDLIQTIGQSAALGAAGIILWGNADYSRSEESCLAVKSYIDETLGRYLVNVSSSAMLCS
KAVCTGNGRCVRKDPSSDSHLHLHPDSFRIKRHPEGRGFVVSGQASKWDILYFGEHFYCR
CY

>XP_001168599.1 hyaluronidase-2 [Pan troglodytes]
LAVAWAMELKPTAPPIFTGRPFVVAWDVPTQDCGPRLKVPLDLNAFDVQASPNEGFVNQN
ITIFYRDRLGLYPRFDSAGRSVHGGVPQNVSLWAHRKMLQKRVEHYIRTQESAGLAVID
WEDWRPVWVRNWQDKDVYRRLSRQLVASRHPDWPPDRIVKQAQYEFEFAAQQFMLETLRY
VKAVRPRHLWGFYLFPDCYNHDYVQNWESYTGRCPDVEVARNDQLAWLWAESTALFPSVY

LDETLASSRHGRNFVSFRVQEALRVARTHHANHALPVYVFTRPTYSRRLTGLSEMDLIS
TIGESAALGAAGVILWGDAGYTTSTETCQYLKDYLTRLLVPYVVNVSWATQYCSRAQCHG
HGRCVRRNPSASTFLHLSTNSFRLVPGHAPGEPQLRPVGELSWADLDHLQTHFRCQCYLG
WSGEQ

>XP_687640.2 hyaluronidase-2 isoform X1 [Danio rerio]
HLSGTTRTQRASWLQVLLLMLFWTCLKAQQLKNTRWPLYSGKPLLLAWNAPTEDCRPRHD
VTFQLDQFQIVASPNEGFTKQNLTIFYQDRLGLYPYFKPDSTPVYGGLPQAASLTQHLE
KMPDGLKKYIKDQAVKGLAVIDWEEWRPLWIRNWGPKLIYRDRSQRLVAEKNPTWPLDQV
TKVAQQEFELSARKFMLETLRLAKSLRPQQLWGYYLFPDCYNHNYQTNLQNYTGQCPDIE
VSRNNELKWLWTESTALYPSVYMGKILKDNPKGRQFVRNRVKEGMRLASVGDGSARPV
FVYTRPTYLTNMTSSNPAELLLLTEMDLVSTIGESVALGVAGVILWGDSTYASSQATCSS
LNEYLRGPLGRYLLNVTSAAEQCSRNLCGFRGRCLRKQPNTDTYLHLSASTHRIERQAN
TLKLTGQMSEEELGRLRDDFQCQCYNGYSGDDCSIKD

>NP_003764.3 hyaluronidase-2 precursor [Homo sapiens]
LAVSWAMELKPTAPPIFTGRPFVVAWDVPTQDCGPRLKVPLDLNAFDVQASPNEGFVNQN
ITIFYRDRLGLYPRFDSAGRSVHGGVPQNVSLWAHRKMLQKRVEHYIRTQESAGLAVID
WEDWRPVWVRNWQDKDVYRRLSRQLVASRHPDWPPDRIVKQAQYEFEFAAQQFMLETLRY
VKAVRPRHLWGFYLFPDCYNHDYVQNWESYTGRCPDVEVARNDQLAWLWAESTALFPSVY
LDETLASSRHGRNFVSFRVQEALRVARTHHANHALPVYVFTRPTYSRRLTGLSEMDLIS
TIGESAALGAAGVILWGDAGYTTSTETCQYLKDYLTRLLVPYVVNVSWATQYCSRAQCHG
HGRCVRRNPSASTFLHLSTNSFRLVPGHAPGEPQLRPVGELSWADIDHLQTHFRCQCYLG
WSGEQ

>XP_003476739.1 hyaluronidase-2 [Cavia porcellus]
AGLGPIVTLALVLPVAWAMELKPTGPPIFTGRPFVVAWDVPTQDCGPRHKVSLDLKAFDV
QASPNEGFVNQSITIFYYDRLGLYPHFNEAGMSVHGGVPQNGSLQEHLGMLRKPVEHYI
RTREPAGLAIIDWEHWRPVWVRNWQDKDVYRQWSRQLVASRHPDWPKDQIVKEAQYEFEF
AARQFMLKTLHYVKSVRPQHLWGFYLFPDCYNHDYVQNWESYTGRCPDVEVARNDQLAWL
WAESTALFPSVYLDETLASSAQGRNFVSFRVQEALRVAQSHHANHALPVYVFTRPTYTHT
SKLTGLSEMDLVSTIGESAALGAAGVILWGDTSSMETCQYLQKYLTDLLVPYVVNVS
WATQYCSWAQCHGHGRCVRRNPTSNTFLHLNTSSFRLVPGRVPDGLQLQPEGELSRADLN
YLRTHFRCQCY

>XP_003257153.1 hyaluronidase-2 [Nomascus leucogenys]
LAVAWAMELKPTAPPIFTGRPFVVAWDVPTQDCGPRLKVPLDLNAFDVQASPNEGFVNQN
ITIFYRDRLGLYPRFDSAGRSVHGGVPQNVSLWAHRKMLQKRVEHYIRTQESAGLAVID
WEDWRPVWVRNWQEKDVYRRSSRQLVASRHPDWPPDRIVKQAQYEFEFAAQQFMLETLRY
VKAVRPRHLWGFYLFPDCYNHDYVQNWESYTGRCPDVEVARNDQLAWLWAESTALFPSVY
LDETLASSRHGRNFVSFRVQEALRVARTHHANHALPVYVFTRPTYSRRLTGLSEMDLIS
TIGESAALGAAGVILWGDAGYTTSTETCQYLKDYLTRLLVPYVVNVSWATQYCSWAQCHG
HGRCVRRNPSANTFLHLSTNSFRLVPGHAPGEPQLRPVGELSWADLDHLQTHFRCQCYLG
WSGEQ

>XP_002758427.1 hyaluronidase-2 [Callithrix jacchus]
LVVAWAMELKPTAPPIFTGRPFVVAWDVPTQDCGPRLKVPLDLNAFDVQASPNEGFVNQN
ITIFYRDRLGLYPRFDSAGRSVHGGVPQNGSLWAHLEMLRDHVEHYIRTPEPAGLAVID
WEDWRPVWVRNWQDKDVYRRSSRQLVASRHPDWQADRVVKQAQYEFECAARQFMLETLRY
VKAVRPRHLWGFYLFPDCYNHDYVQNWKSYTGRCPDVEVARNDQLAWLWANSTALFPSVY

LEETLASSAHGRNFVSFRVQEALRVAHTHHANHALPVYVFTRPTYSRRLRGLSEMDLIS
TIGESAALGAAGVILWGDAGYTTSTETCQYLKDYLTRLLVPYVVNVSWATQYCSWAQCHG
HGRCVRRNPSASTFLHLSANSFRLVPGRAPGEPQLRPVGNLSSADRHHLQTHFRCQCY

>XP_001102414.2 hyaluronidase-1 isoform X1 [Macaca mulatta]
PLLPNRPFATVWNANTQWCLERHSVDVDVSIFDVVANPGQTFRGPDMTIFYSSQLGTYPY
YTPTGEPVFGGLPQNASLIAHLARTFQDILAAIPAPDFSGLAVIDWEAWRPRWAFNWDT
KDIYRQRSRALVQAQHPDWPVTQVEAVAQDQFQGAARAWMAGTLQLGRALRPRGLWGFYG
FPDCYNYDFLSPNYTGQCPSGIRAQNDQLGWLWGQSRALYPSIYMPAVLEGTGKSQMYVQ
HRVAEAFRVAVAAGDPNLPVLPYVQIFYDMTNHFLPLDELEHSLGESAAQGAAGVVLW
VSWENTRTKESCQAIKEYMDTTLGPFILNVTSGALLCSQALCSSHGRCVRRPSHPKALLI
LNPASFSIQLTPDGGPLSLRGALSLEDQAQMAVEFKCRCYPGWQGPWCEQKS

>NP_742037.2 hyaluronidase-2 precursor [Rattus norvegicus]
APPIFTGRPFVVAWNVPTQECAPRHKVPLDLRAFDVEATPNEGFFNQNITTFYYDRLGLY
PRFDAAGMSVHGGVPQNGSLCAHLPMLKEAVERYIQTQEPAGLAVIDWEEWRPVWVRNW
QEKDVYRQSSRQLVASRHPDWPSDRIVKQAQYEFEFAARQFMLNTLRYVKAVRPQHLWGF
YLFPDCYNHDYVQNWDSYTGRCPDVEVARNDQLAWLWAESTALFPSVYLDETLASSKHSR
NFVSFRVQEALRVAHTHHANHALPVYVFTRPTYTRGLTELSQMDLISTIGESAALGSAG
VIFWGDSVYASSMENCQNLKKYLTQTLVPYIVNVSWATQYCSWTQCHGHGRCVRRNPSAS
TFLHLSPSSFRLVPGRTPSEPQLRPEGELSEDDLSYLQMHFRCHCY

>NP_999605.1 hyaluronidase-2 precursor [Sus scrofa]
LAVAWATELKPTAPPIFTGRPFVVAWDVPTQDCGPRHKVPLDPKDMKAFDVQASPNEGFV
NQNITIFYRDRLGMYPHFDSVGRSVHGGVPQNGSLWVHLKMLKGHVEHYIRTQEPAGLA
VIDWEDWRPVWVRNWQDKDVYRRLSRQLVASRHPDWPPDRVVKQAQYEFEFAARQFMLET
LRFVKAFRPQHLWGFYLFPDCYNHDYVQNWETYTGRCPDVEVSRNDQLAWLWAESTALFP
SVYLEETLASSTHGRNFVSFRVQEALRVAHTHHANHALPVYVFTRPTYSRGLTGLSEMD
LISTIGESAALGAAGVILWGDAGYTTSMETCQYLKDYLTRLLVPYVVNVSWAAQYCSWAQ
CHGHGRCVRRDPSANIFLHLSASSFRLVASHAPGEPQLRPEGELSWADRNHLQTHFRCQC
Y

>NP_001009754.1 hyaluronidase-2 precursor [Ovis aries]
LVVAWATELKPTAPPIFTGRPFVVAWDVPTQDCGPRHKMPLDPKDMKAFDVQASPNEGFV
NQNITIFYRDRLGMYPHFNSVGRSVHGGVPQNGSLWVHLEMLKGHVEHYIRTQEPAGLA
VIDWEDWRPVWVRNWQDKDVYRRLSRQLVASHHPDWPPERIVKEAQYEFEFAARQFMLET
LRFVKAFRPRHLWGFYLFPDCYNHDYVQNWETYTGRCPDVEVSRNDQLSWLWAESTALFP
SVYLEETLASSTHGRNFVSFRVQEALRVADVHHANHALPVYVFTRPTYSRGLTGLSEMD
LISTIGESAALGAAGVILWGDAGFTTSNETCRRLKDYLTRSLVPYVVNVSWAAQYCSWAQ
CHGHGRCVRRDPNAHTFLHLSASSFRLVPSHAPDEPRLRPEGELSWADRNHLQTHFRCQC
Y

>NP_083196.2 hyaluronoglucosaminidase 6 precursor [Mus musculus]
VLFVLLVAPAALKPAMPPVIKDHPFNVFWAAPTLFCKDNFNVNMNLQVFNIIPNPFET
QSGSTITVFYPKELGYYPYFSEDGTSFYGGIPQKVNLSEHLRKSAGDIADAVTLWRSEG
LAVIDWEGWRPQWDRNWGSRMIYKNHSLAFTRHHHPDWAETKVRTAAQKEFENAGRSFMN
VTLTLALEMRPKRLWGFYLYPDCYNYDYRINPEFYTGSCPDDEIFRNDQLMWLWEKSAAL
YPSIYLSKILKSNLNALKFVHFRVREALRVAEMARKDYVLPVFIFSRPFYLQSIEALSE
EDLVHTIGESAALGAAGIILWGGYEYSDTKETCLSVRQTVHGLLGPYVLNVTSAAKLCSQ
NLCNSHGRCVRKTPESSFYLHMPEDSHKNYVSKKGFRFVIPSPSKLKTIMNMKNGFVCHC

Y

>NP_001019491.1 hyaluronoglucosaminidase 6 precursor [Rattus norvegicus]
PPVIKNQPFNIFWAAPTLFCKDNFDVNMNLQAFNIIPNPFETQSGSTIAVFYPKELGYYP
YFSEDGISFYGGIPQNVNLSEHLRKSANDIANAVSLWRSEGLAVIDWEGWRPQWDRNWG
GRIIYKNHSLAFTRHHHPDWAETKVRTVAQQEFENAGKSLMNVTLTLALEMRPKRLWGFY
LYPDCYNYDYRINPEFYTGSCPDDEIFRNDQLMWLWEKSAALYPSIYLSKILKSDINALK
FVHFRVREALRIAEKARKDYALPVFIFSRPFYLQSIEALSEEDLVHTIGESAALGAAGI
ILWGGYEYSDTKETCLSLQQTVHGLLGPYALNVTSAAKLCSQSLCNSHGRCIRKTPDSSF
YLHMPEDSQKNSVTSKGVNFVISPKSKLKAIVNMKNGFVCHCY

>NP_776772.1 hyaluronidase-2 precursor [Bos taurus]
LVVAWATELKPTAPPIFTGRPFVVAWDVPTQDCGPRHKMPLDPKDMKAFDVQASPNEGFV
NQNITIFYRDRLGMYPHFNSVGRSVHGGVPQNGSLWVHLEMLKGHVEHYIRTQEPAGLA
VIDWEDWRPVWVRNWQDKDVYRRLSRHLVAIRHPDWPPERVAKEAQYEFEFAARQFMLET
LRFVKAFRPRHLWGFYLFPDCYNHDYVQNWETYTGRCPDVEVSRNDQLAWLWAESTALFP
SVYLEETLASSTHGRNFVSFRVQEALRVADVHHANHALPVYVFTRPTYSRGLTGLSEMD
LISTIGESAALGAAGVILWGDAGFTTSNETCRRLKDYLTRSLVPYVVNVSWAAQYCSWAQ
CHGHGRCVRRDPNAHTFLHLSASSFRLVPSHAPDEPRLRPEGELSWADRNHLQMHFRCQC
Y

>NP_149349.2 hyaluronidase-1 isoform 1 precursor [Homo sapiens]
LLPICALFLTLLDMAQGFRGPLLPNRPFTTVWNANTQWCLERHGVDVDVSVFDVVANPG
QTFRGPDMTIFYSSQLGTYPYYTPTGEPVFGGLPQNASLIAHLARTFQDILAAIPAPDF
SGLAVIDWEAWRPRWAFNWDTKDIYRQRSRALVQAQHPDWPAPQVEAVAQDQFQGAARAW
MAGTLQLGRALRPRGLWGFYGFPDCYNYDFLSPNYTGQCPSGIRAQNDQLGWLWGQSRAL
YPSIYMPAVLEGTGKSQMYVQHRVAEAFRVAVAAGDPNLPVLPYVQIFYDTTNHFLPL
DELEHSLGESAAQGAAGVVLWVSWENTRTKESCQAIKEYMDTTLGPFILNVTSGALLCSQ
ALCSGHGRCVRRTSHPKALLLLNPASFSIQLTPGGGPLSLRGALSLEDQAQMAVEFKCRC
Y

>NP_001035086.1 hyaluronidase-1 precursor [Danio rerio]
PLIKLPFISIWNAPTERCKSRFGVELDLSVFDIVHNPNQTFMGDNITIFYSDKLGKYPH
YGPNDEPIYGGVPQNASLNEHLKKADEDLRKNIPDPEFQGLAIIDWEKWRPLWERNWDS
KEVYWKASRAIVKAKHPTWSPDQIETEAVKEFEASSMAFMVETLKLGRRERSGGLWGFYG
FPCCYNYQYKKNETYTGECPALEMKRNDKLAWMWNVSSALYPDIYLDLGLRGRGQDILLY
SRYRILEAMRVREKTTHQMTSVFPYARIAFTYSMEFLSQDDLVHTIGESVALGASGVV
LWGDGNFSRTKRACEAVRDYLDVTLGRYIVNVTEAAFLCSRKVCSSQGRCVRRDPSASVY
LHLNPEMWSIIPRAQLPGPITGGPSYVAHRRLWTGQEETSRFADSFRCQCF

>XP_003502176.1 hyaluronidase-like [Cricetulus griseus]
PPVIKDQPFNIFWAAPTFFCQERFGVNMNLQVFGIIPNPLETQSGSTIAIFYPDELGYYP
YFSEDRRSIYGGIPQKGNLSEHLKKSASDIADTVTWWRSEGLAVIDWEGWKPQWDRNWG
SRIIYKNHSLAFTRHHHPDWSEAKVRTVAQQEFENAGRSFMNITLTLALEMRPKRLWGFY
LYPDCYNYDYRINPEFYTGRCPDDEIFHNDQLLWLWEKSTALYSSIYLSKILKSNLNALK
FVHFRVREALRVAEMARKDYVLPVFVFSRPFYLQSFEALSEEDLVHTIGESAALGAAGI
ILWGGHEYSESKEACLSVQQTIQGLLGPYVFNVTSAAKLCSQSLCNSHGRCVRKTVESSF
YLHMPEDSHKSYVINKGFKFVTSARSKLKTIMNMKNGFVCHCYYGWYGESCRSHFPNLLS
RKNKAPVTAFNSVVFLGMTLCV

>XP_003257149.1 hyaluronidase-1 [Nomascus leucogenys]
PLLPNRPFTTVWNANTQWCLERHGVDVDVSVFDVVANPGQTFRGPDMTIFYSSQLGTYPY
YTPTGEPVFGGLPQNASLIAHLARTFQDILAAIPAPEFSGLAVIDWEAWRPRWAFNWDT
KDIYRQRSRALVQAQHPDWPAPQVEAVAQDQFQGAARAWMAGTLQLGRALRPRGLWGFYG
FPDCYNYDFLSPNYTGQCPSGIRAQNDQLGWLWGQSRALYPSIYMPAVLEGTGKSQMYVQ
HRVAEAFRVAVTAGDPNLPVLPYVQIFYDMTNHFLPLDELEHSLGESAAQGAAGVVLW
VSWENTRTKESCQAIKEYMDTTLGPFILNVTSGALLCSQALCSGHGRCVRRPSHPKALLL
LNPASFSIQLTPGGGPLSLQGALSLEDQAQMAVEFKCRCYPGWQGLWCEQKS

>XP_002813766.6 hyaluronidase-1 isoform X1 [Pongo abelii]
PLLPNRPFTTVWNANTQWCLERHGVDVDVSVFDVVVNPGQTFRGPDMTIFYSSQLGTYPY
YTPSGEPVFGGLPQNASLIAHLARTFQDILAAIPAPDFSGLAVIDWEAWRPRWAFNWDT
KDIYRQRSRALVQAQHPDWPAPQVEAVAQDQFQGAARAWMAGTLQLGRALRPRGLWGFYG
FPDCYNYDFLSPNYTGQCPSGIRAQNDQLGWLWGQSRALYPSIYMPAVLEGTGKSQMYVQ
HRVAEAFRVAVAAGDPNLPVLPYVQIFYDMTNHFLPLDELEHSLGESAAQGAAGVVLW
VSWENTRTKESCQAIKEYMDTTLGPFILNVTSGALLCSQALCSGHGRCVRRPSHPKALLL
LNPASFSIQLTPGGGPLSLRGALSLEDQAQMAVEFKCRCYPGWQGPWCEQKS

>NP_001017941.1 hyaluronidase-1 precursor [Bos taurus]
LLPVCTLFLNLLSMTQGSRDPVVPNQPFTTIWNANTEWCMKKHGVDVDISIFDVVTNPGQ
TFRGPNMTIFYSSQLGTYPYYTSAGEPVFGGLPQNASLNAHLARTFQDILAAMPEPRFS
GLAVIDWEAWRPRWAFNWDTKDIYRQRSRALVQKQHPDWLAPRVEAAAQDQFEGAAEEWM
AGTLKLGQALRPQGLWGFYNFPECYNYDFKSPNYTGRCPLNICAQNDQLGWLWGQSRALY
PSIYLPAALEGTKKTQMFVQHRVAEAFRVAAGAGDPKLPVLPYMQLFYDMTNHFLPA
EELEHSLGESAAQGAAGVVLWVSWLSTSTKESCQAIKEYVDTTLGPSILNVTSGARLCSQ
VLCSGHGRCARRPSYPKARLILNSTSFSIKPTPGGGPLTLQGALSLEDRLRMAVEFECRC
Y

>XP_002920567.1 hyaluronidase-2 isoform X3 [Ailuropoda melanoleuca]
PMVPNQPFTTIWNANTQWCLEKYGVDVDVSVFDVVANPGQTFRGPDMTIFYSYQLGTYPY
YTSAGEPVFGGLPQNASLDTHLAHSFQDILAAIPASDFSGLAVIDWEAWRPRWAFNWDT
KDIYRQRSRTLVQGQHPDWPAPWVEAAARDQFQEAARAWMAGTLKLGQALRPRGLWGFYG
FPDCYNYDFLSPNYTGQCPPGISAQNDQLGWLWGQSRALYPSIYMPAELEGRGKGQMYVR
HRVGEAFRVALGVGDPNLPVLPYAQIFYDKTNRFLPLDELEHSLGESAAQGAAGVVLW
VSWENTKTKESCQAIKEYVDTTLGPFLLNVTSGALLCSQALCSGHGRCARRPSHPEALLI
LNPTSFSIQLTRGGGPLTLQGALSLEDRMRMAVEFQCRCY

>XP_003476738.1 hyaluronidase-1 isoform X1 [Cavia porcellus]
PVVPNQPFITVWNADTQRCLKNYSVDVDVSVFDVVANPGQTFFGPNMTIFYSSKLGTYPY
YTTTGEPVFGGLPQNASLGEHLAYAFHDIQATMPAPDFSGLVVIDWEAWRPRWAFNWDT
KDIYRQRSQALIQAQHPDWPESQVKTVAKDQFQKAAQAWMAGTLQLGQALRPRGLWGFYG
FPDCYNYNFKSLNYTGQCPLGIPTENDQLGWLWNQSRALYPSIYIPAALVGTGKTQRYVR
HRVAEAFRVARAARNPSLPVLPYTQIFYESTSHLLPMEELEHTLGESAAQGAAGVVF
WVSSEDTNSKESCQAIKEYMDTTLGPFILNVTSGALLCSQALCFGHGRCVRRPSHPDALL
ILSLASFSIQFTPGGKPLTLKGALSHEDQAQMAVEFRCHCY

>NP_999606.1 hyaluronidase-1 precursor [Sus scrofa]
LLPICTLFLNLLSVAQGSRDPVVLNRPFTTIWNANTQWCLKRHGVDVDVSVFEVVVNPGQ
TFRGPNMTIFYSSQLGTYPYYTSAGEPVFGGLPQNASLDVHLNRTFKDILAAMPESNFS
GLAVIDWEAWRPRWAFNWDAKDIYRQRSRALVQKQHPDWPAPWVEAAAQDQFQEAAQTWM

AGTLKLGQTLRPHGLWGFYGFPDCYNYDFQSSNYTGQCPPGVSAQNDQLGWLWGQSRALY
PSIYLPSALEGTNKTQLYVQHRVNEAFRVAAAAGDPNLPVLPYAQIFHDMTNRLLSR
EELEHSLGESAAQGAAGVVLWVSWENTRTKESCQSIKEYVDTTLGPFILNVTSGALLCSQ
AVCSGHGRCVRRPSHTEALPILNPSSFSIKPTPGGGPLTLQGALSLKDRVQMAEEFQCRC
Y

>XP_002713406.3 hyaluronidase-1 isoform X1 [Oryctolagus cuniculus]
TVPPKPFTTVWNADTQWCLEMHGVDVDVSVFDVVVNPRQAFRGPNVTIFYSSQLGTYPYY
TPAGEPVFGGLPQNASLATHLARTFHDILAAMPAPDFSGLVVIDWEAWRPRWAFNWDAK
DIYRQRSRALVRATHPDWPAPRVDQAAQDQFQGAAQAWMTDTLQLGRLLRPGGLWGFYGF
PDCYNSDFLSPNYTGQCAPDTSEQNDQLGWLWNHSCALYPSIYMPAALEGTGKEWMYVRH
RVTEAFRVATAAGNPTLPVLPYAQIFYALTNHFLPLEELEHSLGESMAQGAAGVVLW
VSSENTKTKESCLAIKTYVDTTLGPFILNVTSAALLCSQALCSGHGRCARHPSHPEALLV
LSPASFSIQLTPGGPLTLQGALSLKDRVQMATEFQCHCY

>XP_003500449.1 hyaluronidase-1 [Cricetulus griseus]
TVPNKPFITIWNADTYWCLKNYGVDVDVSVFDVIANKEQSFQGPNVTIFYSWQLGTYPYY
TSTGEPIFGGLPQNASLVTHLACTFQDIKAVMPEPDFSGLAVIDWEAWRPRWAFNWDSK
DIYRQRSVALVQAEHPDWPETLVEAVAQDQFQEAAQAWMAGTLQLGQILRPHGLWGYYGF
PDCYNHNFLSPNYTGQCSLNIRDQNDQLDWLWNQSYALYPSVYLPAALMGTTGKAQLYVR
HRVQEAFRVATASRDPKVPILPYVQIFYEMTNHLLPLEELEHSIGESAAQGAAGVVV
WVSSENTTTKESCQTIKEYMDSTLGPFILNVTSAALLCSEALCSGHGRCARRPSYPEALL
TLNPASFSIQITHDGRPPSLKGTLSLKDQAQMAMKFKCRCYS

>XP_001509131.1 hyaluronidase-1 [Ornithorhynchus anatinus]
PVVPNHPFTTIWNADTHTCLEKFHVDVDLDVFDVVANPGEAFMGREMTIFYSNKLGLYPS
YTSSGQPLHGGLPQNASLATHLAQAQLDIQAAIPKSNYWGLAVIDWESWRPLWALNWDS
KDVYRERSRALVREEHPDWSSWQVEEEAVIQFQTAARAWMSQTLQLGQTLRPRGLWGFYG
FPACYNYDFKNPNYTGACPDGIQPLNQELQWLWNQSRALYPSIYLPSELEGTGYTWPFVR
ERVREAFRMAMGTGDASLPVLPYAQIYYDKTNHFLPLEELENSIGESVAQGVAGVVLW
VSWEDTHTKESCENIKDYVDSTLGPFILNLTSSTQLCSQALCSGHGRCARRRDHPHAFLY
LNSSSFSIHRPPGSRHLVLTGKLPKEDQARMMIEFECHCY

>XP_001139800.4 hyaluronidase-4-like [Pan troglodytes]
PPVIKSQPFNIFWAAPTMYCMPFFNMAINLQVFNIISNPLETQSGSKIAIFYPNELGYYP
YLSQDGKSFNGGIPQNVSLSEHLRKTADDIGEGVPWWRSEELVVIDWESWKPQWDRNRG
SRIIYKNHSLAFTRNHHPYWSEMKVETVAQEEFENAGKNFMNITLTLALEMRPKCLWGFY
LYPDCYNYDYRINPETYTGNCPKDEVLRNDQLLWLWEKSAALYPSIHLDKILKSSLNALK
FVHYQVREAMRVAEMARHDYVLPVFIFSRPFYLHRTEALSQEDLVHTIGESAALGAAGV
ILWGGYEYSASKENCLSVQQSIRGPLGHYAVNVTSAAKLCSQSLCNNHGRCIRKTPESSF
YLHMPESSGKEYVLNKSFRFIISENNKQKTIKDMKNGFVCHCY

>NP_032343.3 hyaluronidase-1 isoform 1 precursor [Mus musculus]
VVSNRPFITVWNGDTHWCLTEYGVDVDVSVFDVVANKEQSFQGSNMTIFYREELGTYPYY
TPTGEPVFGGLPQNASLVTHLAHTFQDIKAAMPEPDFSGLAVIDWEAWRPRWAFNWDSK
DIYRQRSMELVQAEHPDWPETLVEAAAKNQFQEAAEAWMAGTLQLGQVLRPRGLWGYYGF
PDCYNNDFLSLNYTGQCPVFVRDQNDQLGWLWNQSYALYPSIYLPAALMGTEKSQMYVRH
RVQEALRVAIVSRDPHVPVMPYVQIFYEMTDYLLPLEELEHSLGESAAQGVAGAVLW
LSSDKTSTKESCQAIKAYMDSTLGPFIVNVTSAALLCSEALCSGHGRCVRHPSYPEALLT
LNPASFSIELTHDGRPPSLKGTLSLKDRAQMAMKFRCRCY

>NP_997499.2 hyaluronidase-1 isoform 1 precursor [Rattus norvegicus]
MVSNRPFITVWNADTHWCLKDHGVDVDVSVFDVVANKEQNFQGPNMTIFYREELGTYPYY
TPTGEPVFGGLPQNASLVTHLAHAFQDIKAAMPEPDFSGLAVIDWEAWRPRWAFNWDSK
DIYQQRSMELVRAEHPDWPETLVEAEAQDQFQEAAQAWMAGTLQLGQVLRPRGLWGYYGF
PDCYNYDFLSPNYTGQCSLSIHDQNDQLGWLWNQSYALYPSIYLPAALMGTGKSQMYVRY
RVQEAFRLALVSRDPHVPIMPYVQIFYEKTDYLLPLEELEHSLGESAAQGAAGAVLW
ISSEKTSTKESCQAIKAYMDSTLGPFILNVTSAALLCSEALCSGRGRCVRHPSYPEALLT
LSPASFSIEPTHDGRPLSLKGTLSLKDRAQMAMKFKCRCYRGWSGEWCKKQ

>XP_001168796.1 hyaluronidase-1 isoform X2 [Pan troglodytes]
LLPICALFLTLLDMAQGFRGPLLPNRPFTTVWNANTQWCLERHGVDVDVSVFDVVANPG
QTFRGPDMTIFYSSQLGTYPYYTPTGEPVFGGLPQNASLIAHLARTFQDILAAIPAPDF
SGLAVIDWEAWRPRWAFNWDTKDIYRQRSRALVQAQHPDWPAPQVEAVAQDQFQGAARAW
MAGTLQLGRALRPRGLWGFYGFPDCYNYDFLSPNYTGQCPSGIRAQNDQLGWLWGQSRAL
YPSIYMPAVLEGTGKSQMYVQHRVAEAFRVAVAAGDPNLPVLPYVQIFYDTTNHFL
PLESCQAIKEYMDTTLGPFILNVTSGALLCSQ
ALCSGHGRCVRRTSHPKALLLLNPASFSIQLTPGGGPLSLQGALSLEDQAQMAVEFKCRC
YPGWQGPWCEQKS

>NP_997482.2 hyaluronidase-3 precursor [Rattus norvegicus]
ITQLGLTLVVGLTLCLVHVQALLQVPELPFSVLWNVPSARCKTRFGVHLPLDALGIIANH
GQRFHGQNITIFYKNQFGLYPYFGPRGTAHNGGIPQAVSLDHHLAQAAHQILHNLGSSF
AGLAVLDWEEWYPLWAGNWGTHRQVYQAASWAWAQQMFPDLNPQEQLHKAQTGFEQAARA
LMEHTLRLGQMLRPHGLWGFYRYPVCGNGWHNMASNYTGHCHPAIITRNTQLRWLWAASS
ALFPSIYLPPRLPPAYHQTFVRHRLEEAFRVALTGHAHPLPVLAYVRLTHRSSGRFLS
LDDLMQTIGVSAALGAAGVVLWGDLSVSSSEEECWRLHDYLVGTLGPYVINVTKAATACS
HQRCHGHGRCSWKDPGQMEAFLHLQPDD

>NP_001193181.1 hyaluronidase-3 precursor [Bos taurus]
PARPFSVLWNVPSARCKNRFGVPLPLEALGISANRGQHFHGQNVTIFYKNRLGFYPYLGP
RGTVHNGGIPQAVPLGCHLARAAHQIRHSLWPGFAGLAVLDWEEWCPLWAGNWGRRQVY
RAASWAWAQWVFPNLDPQEQLHKARVGFEQAARALMEDTLWLGRALQPQGLWGFYRFPAC
GNGWRGTASNYTGHCHAAAVARNTQLHWLWAASSALFPSIYLPPRLPPAHHQAFVRYRLE
EAFRVAIAGHPHPLPVLAYARLTHRSSGRFLSLDELVQTIGVSAALGAAGVVLWGDLS
FSSSEEECWHLHDYLLGTLGPYVINVTRAAVACSHQRCHGHGRCAWQNPGQLEVFLHLQP
DGSPGAWESFSCRCYHGWAGPTCQEPRPELRPEEA

>NP_001186958.1 hyaluronidase-3 isoform 1 precursor [Homo sapiens]
LVLGVALCLGCGQPLPQVPERPFSVLWNVPSAHCEARFGVHLPLNALGIIANRGQHFHGQ
NMTIFYKNQLGLYPYFGPRGTAHNGGIPQALPLDRHLALAAYQIHHSLRPGFAGPAVLD
WEEWCPLWAGNWGRRRAYQAASWAWAQQVFPDLDPQEQLYKAYTGFEQAARALMEDTLRV
AQALRPHGLWGFYHYPACGNGWHSMASNYTGRCHAATLARNTQLHWLWAASSALFPSIYL
PPRLPPAHHQAFVRHRLEEAFRVALVGHRHPLPVLAYVRLTHRRSGRFLSQDDLVQSI
GVSAALGAAGVVLWGDLSLSSSEEECWHLHDYLVDTLGPYVINVTRAAMACSHQRCHGHG
RCARRDPGQMEAFLHLWPDGSLGDWKSFSCHCYWGWAGP
TCQE

>NP_999604.1 hyaluronidase-3 precursor [Sus scrofa]
PERPFCVLWNVPSARCKARFGVHLPLEALGITANHGQRFHGQNITIFYKSQLGLYPYFGP

RGTAHNGGIPQAVSLDHHLARAAYQIHRSLRPGFTGLAVLDWEEWCPLWAGNWGRRQAY
QAASCAWAQRVYPNLDPQEQLCKARAGFEEAARALMEDTLRLGRMLRPHGLWGFYHYPAC
GNGWHGTASNYTGHCHAAALARNTQLYWLWAASSALFPSIYLPPGLPPAYHQAFVRYRLE
EAFRVALVGHPHPLPVLAYARLTHRNSGRFLSQDELVQTIGVSAALGASGVVLWGDLS
FSSSEEECWHLRGYLVGTLGPYVINVTRAAMACSHQRCHGHGRCAWQDPGQLKVFLHLHP
GG

>XP_001493753.3 hyaluronidase-3 isoform X1 [Equus caballus]
PECPFSVLWNVPSAHCKARFGVHLPLEALGITANCGQRFHGQKITIFYKNQLGLYPYLGP
RGTAHNGGIPQAVPLDCHLARAAYQIHHSLRPGFTGLAVLDWEEWSPLWAGNWGRRRAY
QTASWAWAQRVFPYLDPQEQLHKAQTGFEQAARALMEDTLRLGQALQPYGLWGFYRFPAC
GNGWRGMASNYTGHCHAATLARNTQLHWLWAASSALFPSIYLPPRLPPAHHQAFVRYRLE
EAFRVALTGHIHPLPVLAYARLTHRSSGRFLSQDDLVQTIGVSAALGAAGVVLWGDLS
FSSSEEECWRLHDYLVGTLGPYVINVTRAATACSQQRCHGHGRCARRDPGQMEAFLHLQP
DG

>NP_001121765.1 hyaluronidase-3 [Danio rerio]
VIGRRGFQVIWNVPTARCQRRYGVSLPLQQYNIIHNSHQRFQGQNMSIFYQRRLGLYPYI
SREGVKVNGGLPQEGYLKAHLSLAGVEIREKLRSSFSGLAVLDWEAWEPVWKWNFGTRI
VYRKLSKKLVRWEHPDMSEEEVKSKAKLDFELAARQFMEETLRLGLRLCPEGLWGFYGFP
SCYNNNGQGQSGYTGKCHNGTEILNDRLGFLWQQSTALYPSIYLWRKLAGHTHAQLMVRH
RILEALRVASQHSPGSEPLPVFPYTRVAFIHSLTFLNQTDLEHTLGESAALGAAGVVLW
GELSFAKSKHQCTLLRDYLSSVLGEYITALRAGVTNCSERLCNAQGRCSRWDPHSHH
MIPLLGPHDALSLSDMRSKFKCVCYEGWS

>NP_821139.2 hyaluronidase-3 precursor [Mus musculus]
VPEHPFSVVWNVPSARCKAHFGVHLPLDALGIVANHGQHFHGQNISIFYKNQFGLYPYFG
PRGTAHNGGIPQAVSLDHHLARAAHQILHSLGSSFAGLAVLDWEEWYPLWAGNWGPHRQ
VYLAASWVWTQQMFPGLDPQEQLHKAHTSFEQAARALMEYTLQLGRTLRPSGLWGFYRYP
ACGNGWHKMASNYTGHCHAAITTRNTQLRWLWAASSALFPSIYLPPRLPLAYRQAFVRHR
LEEAFRVALLEHSHPLPVLAYSRLTHRSSGRFLSLDDLMQTIGVSAALGTAGVVLWGD
LSFSSSEEKCWRLHDYLVGTLGPYVINVTKAAMACSHQRCHGHGRCARKDPGQMEAFLHL
QPDD

>XP_002128103.1 hyaluronidase-1-like [Ciona intestinalis]
MSFSYVFLALGILGSVCHSQSLQSYLTTSLKDNIWQPPLPDRPFIGVWNVDSNRCLT
KYNVPIDLSSFDIIHNPNEEYVGNQMVIFYAALLGLYPKYGTDGLAVNGGIPQNGNISA
HYEKCVDDIMARIPDSNYNGIAVIDWEAWRPKWERNGWGSGLIYQNKSIEKVKKEHPSWP
LNKVKAQAKIEFEEAAKSYMLGTLNLARLMRPKAHWGLYLFPDCYNYDKTGKRMTCTT
KTINMNNDIQWLFDASNALYPSTYLGLWFKNTNASMEYVANRVKEALRVDFDRKNDISAP
VYVYNNIFYRKSSEFLTQKDIIHSSGTAAVLGASGVVFWGDSICSKTKEMCENLKYYVE
NILGPYIKSASDSAAMCSLNTCNGHGRCV

>XP_003642042.3 hyaluronidase-3 isoform X1 [Gallus gallus]
PFAVLWNIPSSRCQRRFGVGLPLADYGIVENRGGRFAGQNITIFYKNKFGLYPYISPQG
VPHNGGIPQRAPLRAHLARVAGDVRLRLRPAFSGLAVVDWEEWRPLWARNWGRKRVYQLA
SQRWAQERGRGRRLARRAFERAARALMEQTLLLGRSLRPAGLWGFYRFPDCFND
DWAKVANYTGRCRPAEVQRNDRLRWLWAASAALYPSIYLPPLLPPGLRRRYVHHRLCEAL
RLAAGRLPVVAYSRLSYRRSPRFLEPADLEHTIGESAALGAAGVVLWGDMSYSR
SAESCSSLRHYLVSVLGPYVANVTAAARACSLEQCHGHGRCVRRQPRELSILLHLGAGSW

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