

Sequence (partial) of HSP-70 and HSP-70-like genes in *P. davidi*

>group-1/5 (HSP-1)

MVNAIGIDLGTTYSCVGVFQNGKVEIANDQGNRTTPSYVAFTDTERIIGDGAKNQVAMNPHNTVFDKRLIG
RKFDAAVQSDMKHWPFFKVISADGGRPKVQVEFKGETKEFFPEEISSMVLTKMKETAEAFLGQAVKDAVTV
PAYFNDSQRQATKDAGAIAGLNLRIINEPTAAAIAYGLDKKGTGERNVLIFDLGGGTFDVSILTIEDGIFEVKST
AGDTHLGGEDFDNRMVNHFVAEFKRKHKKDVASNPRALRRLRACERAKRTLSSSTQASIEIDSLFEGIDYYT
SITRARFEELCADLFRNTMDPVEKALRDAKMDKAIHQHDIIVLVGGSTRIPKVQKLLSDFSGKELNKSINPDEAV
AYGAAVQAAILSGDKSETVQDLLLLDVAPLSLGIETAGGVMTAIKRNNTVPTKTSQTFTTYADNQPGVLIQVFE
GERAMTKDNLLGKFEELSGIPPAPRGVPQIEVTFDVEDANGILTVSAQDKSTGKKNITITNDKGRLSKEEIERM
VQEAKEYKGEDEAQRDRVSAKNSLESYCFNMKQTVDEKVKDKISDDDRKKIVDKCAETLSWLDANQTAEK
EEFEHHLKEIEAVCNPIITKMYQSAGGAPGGFPGGAPGAGGAPGAGGAGGPTIEEVD*

>group-2 (HSP-3/4)

YNDKMRKAGVAVGVSDAGKKDKKYGTGDGTTYSCVGVYKNGRVANDGNRTSYVASATGDRGDAKNTTN
NTVDAKRGRNDKTVADMKWKVTNKNKSHVNAVGNDRKASAMVTKMKASYGYKHAVTVAYNDARATKDA
GTAGNVVRNTAAAAYGDKKDGNDVGGGTDVSTDNVAVATNGDTHGGDDRVMYKYYKKTGKDRKDRST
KRRVKAKRASTHVKVVSMDGDSTTRAKNMDRGTKVVMADADKDVHVVGGSTRKKDYNGKSRGNDAVAY
GAAVGGVSGDVTVDVNTMGTVGGVMTKTRNTVTKKSVSTAADNTVTVGRMTKDNHGKDTGARGVVTDVNG
HVTADKGTGNKNKTTNDNRSDRMNDKADDDKVKVARNYSAYSKNGDKGGKSDKKTAVDTSWSNKATVDK
HKKDGKVASKYAGTTGGDADAGSDDKD*

>group-3 (HSP-6)

MLSTLRSLASTSRLASRNVYRFKSDIRGHVIGVDLGTNTSCVAVMEGKQAKVIENAEGIRTTTPSVVAFTKEGE
RLVGAAAKRQAVTNSQNTLYATKRLIGRRFDDKEVQKDLKVVYPYKIVKAQNGDAWVEAQGVYSPSQVGAY
VLMKMKETAESYLGPVHNAVTVPAYFNDSQRQATKDAGQIAGLNLRVINEPTAAALAYGLDKSDDKIIVY
DLGGGTFDISILEIQKGVFEVKSTNGDITFLGGEDFDNHLVRFVLDTFKKEQGVDLTKDPMAMQVRVREAAKA
KCELSSTTQTDINLPYITMDASGPKHMAKISRQFEKLVDDLKRTIEPCRKALHDAEVKASDIKEVLLVGGM
SRMPKVQELVQQTFGRQPSKAVNPDEAVAMGAAIQGAVLAGNVTDVLLLDVTPLSLGIETLGGVMTKLITRNT
TIPTKKSQVFSTAADGQTQVEIKVYQGERDMAAHNKILGQFSLVGIPPAPRGIPQVEVTFDIDANGIVNVSARD
RGTGKEQQIVIQSSGGLSKDQIENMVREAEEKHAAEDAEEKELVETINQAESVVDHDTAKIKEYADQINQEEAK
AIQEKLEALRTKLADKENLKAADVREELSQLQASLKLFEAAYKKMAEKNSANNADTSSSEPPKEEEEKKEEQ
K*

>group-4 (HSP-110-like)

MSIIGVNICYSTYVAGIKDGGVEVLANEYSHLPTPTSVSFNSTPRPMGYSSKQQAVPKFKSTCAHFTPLLCR
TVEDHGPILDAIPCQVNAVNLNSDAKDLYSTVTVMDCKNQIPITFSIQQVLAFFTKLFTIAHADATRVHVEECLA
IPYYLTVADRHVIMEAAQIAGFPFIKLINETAALASYAFFKKATLPAPPEAPKVVFDIGYSQAQIVLSEVHQLG
AKVRYTKHSREVGFFFDAAIRGYFADEYKKTCLDARSNRRAWLRLADEAERAKKSVCAASTKTIAQIECL
MEDTDFKAEIDRTLFEELAANVFQAFENLVSSFIAETKINPAEVEVELVGGSSRVPLVRSIVEKHFHGEAKTTM
NQDEAIARGTALMAGLLSPVRKTAFTLEDFSPFTVFANYNERREQRSITLVTRGETIPVKNVTLFIPSVDIV
YEESRTAKRPEFYHIANVLSRDPEPNPHSVEPTKFRFPFSYDLSHFILNNGCIRIDKELVPEEPKEPAKEEAP
PAKDEKGDASMDQPPPEKTEKPAKEEAPPAPQPPQPRTRRETRVDHVLNINSGVNPVNVNQEYVTQENDM
READAYAIQKAEAKNSLEAKFFDIQRTLEENADTFDATKKENLGQTMLQIEDFLYEDDADYKIEDYSNKLEELK
KLFNEARLPLGLQIEEAPANAEAMDVEPQVEEPQ*

>Group6 – no clear homology to *C. elegans*.

MAVAAERLALQNLRPSCNVLGLDGTNTVVAIWQAGKPSPEVLTVENNERIIPSYVWCKADGTYDVGRNPV
RNLKQYPQDVCYDAKRMIGQNFTNLTKLQSDYWSFKIVNNGRPAVELSNGKKIEPEEISVQVLKAKAIADA
YACANLEYAVITVPAYFDQNQKQATIDAAKRAGLTVLQLETEPTAAAFANFYDHKRFFDYNLFVFDLGGGTFDI
TIISVKDGRFNVGACGGNNYLGGRDFDNLMLKDLRRRLEEKGAKKFENDVKQRIRLLALAETTKVALTTCDKE
IVNCSDFIANATDKDGMFEITRAEFELAFQLKGLRDLACLEAMKRANLTSDEFANVLLIGGSSRMPMVSQLL
NELFPQSFDISIFYQSKGLNPDEAVAYGAAIRAAQLDPNHRDYKPIENLLPIGIGIENQYSLMIPGGTKYPT
KKKKRYFTTENNQQSASIIVYEGERILASENREILSFVVPNLPPGLAGDVYVDVTFVLDNNGLLTATGKSPTST
AEGSVDYRQVRQAGKPIEQLLLELTLNAENDEQKKILINARVELRKNVENIRNRYENQKNIPLHKKRKHIDSCD
EVIEWLDDNPDEPLDEERINLAKQIEKDAEELIDVRLMTI*

>Group7-N Homology to F44E5.4/F44E5.5

MVFRVGIDPVFGYVYSYCNKYEKEIIDIKINNVYDGIKEVALMFEEIKSKIDGKLGYACIYLSRIYNNEIRKKFIEC
GLKSGFKNVEIFNEETAFLYNAMSQINYKPLNGNVIWIKHFFEIFVWKNINQKAKFCGVWKADRSLNEFQNV
DESKLNGADIVLCNTKIDESNLRKLSECQCFYFNFNWYWSKGSLLKARITAGDSELTHLETTCTFLTRTFILE
IGNDVITSFEPPQQLPIRYTRTFMKNLKNDTLKVNYTPFELPEYSPIFLTFTINQNGIFSVTFDISK

>Group7-C

EGFQGKPLSKAVITVPAAFNEAQKNATLEAATIAGWKEIILLPEPIAAAFAYFNDRPISNNSNVLLFDLGGGTLD
VCIFKIQNNQIEIISNTGDSKFGGRDFDTVLINYFKNVLSTKYGISFVKHKKYLLMVKQCQKIKETLSVMANAGLD
VDDFDANQEGNIEISQEGFQKMCEVLLNKVKNLNSALHNSNFANQINKVLHVGGGSRMPMIKQLLRNMFL
EAEHCIEEHPDEVAIGAAYYAYSLHSDF*

>Group8-N homology to T14G8.3

MVLKPFTSICFSVLLLLVTFVTHAALAAMSIDFGSQFLKIGLVKPGIPMETVLNKEQSRKTANLIAFHNGERYF
GELALQMSYKHPERVIPYVSDLIGKQYNNPIVQDYIKQYPYLNIEDPVRGTVIINTKDSGSDIETLVAMILWNA
HEQAVVYGKTPIHDDVITVPSYLNQAERQCIVRATEIAGLTLQLMSDNGAAALNYAFTRRKEITEKAQNVLIFD
IGASKTTATVVELKLAASNASKTLEPVVAVKGGIGYNRRLGGKILTYKLRDLLAEFEFTKHKHTS

>Group8-C

TPDDPKEPESKEEEPKEQQEPETAFFNETATNDTVKNQNETVTNGTESSPKKKEQKPKVIKAKLKVLYKYSFV
DLNKENIKESKKILSTFEKVEKLAERDAAHNGIEARVYELKERLTNEDFTKFAQGNIEIENLTKILEETATWIEDE
ADLSTTTEEFKRRAPIEEIVSAIEKRIRDLIEAELRKKAEAEAKKKAEEELAKKKAEEAEAKKKEEEALKAAAKEA
EGGEEKPEGTEGGEEKVEGNEDTKEAAGNEEENEKATLDEEETPSVEDILLPKTDDKAHVDL*

>Group9-N Possible group-1 ortholog

VCVEKLCDAITQSIEKEKDVLQRLSNFNIDYEATKSWILEAWSLLSRNENDMNLLAKTLSTINSLIETKEAEINTI
SEKAETFILEGFVEMEDKSNELKIIWEEFIYLSQKNEKIETIQKFEKQKADISCFATSLIHRLNEVKSLNELQNF
LNDMNQLRDNIISAEMLLNDHEIMKIDNYQEDIQNLQYLHTDLNEKTFNAAKEIFEFEKNDDFSTISNISQLYQY
FDNFNAKHRLSSSKLELKR

>Group9-C

EEIASILLHMKNAEEFQGRGISTVVITIPASFTEKQKDATIVGGKLAGWQTINLLPEPVAAAFAYFIDRPLPEN
SNILLDFDGGGLTDICIFQIKNSVFKITRNKGDANIGGRKFDNIIFEYFRNELLLKHEIDIEKNERKKYKMLQCQ
NVKHNL SIRNDDQIHVDDYDSSKDGPPIMLTRQQFENLTEDLINDIKNLLKSATDDLQHPIEKVLHVGGSSRMP
LIKKILQDLFPHAHCCIQQEPEEVAIGAAYSYHLAWKQTQTIQNREELKW

>Group10

DKSFQTFWRNRQSRQLQSFVNNKNGMYDDNWLKRMSKMPKFDIPEKFNFSNTGINAIGIDLGTSSCCVAVN
RENRIEAVAITGERTLPSFVGYDEKDVKCGKVVVGNLGMYSKSTIFDTRKRVIGKTYAEVEIDPMWLFNVVED
GESVKLEVQGYMNTILRQTPEEVTSELLNYMKQKAAEFQKKAVDNVVITIPASFTDNQKEATLKAAELAGLIHV
HLLPEPVAAASITYFIDRRLPNDETILLFDLGGGLTDICIFEVNNFNFKIIRNTGDANIGGRNFDKLLYEYFKEELS
RHGINVELKDTRKYKMLKQCQEIKHNL SALNDQRICVDDYGPSIDAPPIEITRQNFENMSVDFVNDIKILVKYAT
DNLNPNIAKVLHVGGSSRMPLIKSMILQMFPAEQCEVHPPEEVAVGAAYSYHLAQQQK*

>Group11-F

TSFVNRFLNLITVNTVNEQKPTFGQEFNLIFIGPTGAGKSMVLSIYNYLTYNFDEVSTAETVDCILPCHFQLO
TPNFQTVVFTAGPQDVNEHFNDNGESVTQKPKVYSLKTEKYNCKVIDTPGLGDTRGAKQDEKNVDLIRNAIIE
IEELHAICFVMPNSISKLTSNFEMNMRDLLSLFPKALTALKNVFFFFTYANSPFFTTIGDTRSSLEEFISTFEATNNA
KIPFGIENVCVDSEAFMYFIGTQGHKYQNRDLESFRISWDKSKAAIENFLTLEDITPIKSNLDMTYEFEQV
GTLQLETGKILEKL

>Group11-R

RGEIQQTATEVAAVLLKYMKEKAESFQGGKLSKAVITVPAAFTEAQEAATKKAIIAGWETVTLPEPIAASFAYF
IDRPIPNNISILLFDLGGGLTDCVFKIISDQIQIISKNGDSKLGGRDFDNLMDFFSNKLNMDYDVSKLGNVNL
PNLNKDNSETMVNLKDIRDKFKLLMESQKIKHNL SVHNEHDLDIGDIDPAKTGFIKISQQNFYDLSEDLLNKIQ
NTILSALYKSGYKANEINQVLHVGGGCRMAMIKLLHEIFSSAKHWCEEHPDEVVAIGAAYYAYEIFSK

The remaining are derived from singleton EST sequences:

>Possible group-1 or group-1 ortholog

MAQDKIGTEKIKSAVITVPDHFVVGQKEATIHAAGLAGIENVKLITEPTAAAFAYGFDHKRFDGYNLFVFDLGGG
TCDVSIVKVEKGEFKVIGHAGDTQLGGRXFDNHLIEYFDKHKHDLRVFESTDEIITKRKMRLREACEALKIALS
HPAKASETIDLDDVAPGTPDEDLTYKQFKEIVANLTRRCRKLCFDALEETELKADDIDEVLLVGGSSKMRVIKD
MLKEVXPTKELSEAINPDEAVAYGATLRAXQLXPXKXKXGXXXXLAIGIGVASAE

>PDF16F18F

AKNNFIFFIFQLNLFKCKLMQLELILAHRRRVLEYFKMAKLLKLMIMAILQLLCMLHSMVWVNMLEKKQKTRF
LQIRKTQFLIFIALLVNLERMQFNLIQNIHRLFLGLMVILKLRWNIKMIQKDFQ

>PDF16F18R

DRTENIYNFLLLDVAPISFGIETAGGVMTPIIKRNTTVPTKTSVTFSTSVDNQPRVVLQVYEGERVMTKDNLL
GSFELCGIRPAPRGVPTIEVTFNLYTDHLDVTAQDKLTGKSEILPITKLLSERKKIYVSDPDDPNLPAWPID
PEDDITKP*

>PDF20O10F

MMVIHVIGIDGLNGYIAAYNDITKEIIEFETAEVDHRDKSINKVHKICRKEIATFLEEFYACIYIPEYFPKEYRREFI
NNGLQIGFKKVFITGKLVNIYLECFINSEEKPGSTGDIFWIFDRNKLVIWEKTERKSEIIQFGPNIFKDDITESDLLF
YKLDGIDKPNIIFLDSNHQDCSETVKTIFPDCKYISHNSILSYCKSALLKARIAADDQDLDAEIKNCDINNF
ENKIEIWIFXPSGNFDKDPILYLDAGQPLPEFKXMIIPVESXQKI

>PDF20O10R

PIPPNFNLLFDLGGGLTDLVCFKAENKLVIANNGDSNLGGSDFDMVLVQHFEKILETRYKIIMNEKNRYRLI
QKCLDIKHTLSTESEASLDVSEINFEIDEFLTVTRQEFEQMASKLLDQIGDVLKQTFSKTDIFACDINKVLFVGG
GCRMPMIQHFLRKRFPKAEXSCDENPDGMVAIGAAYSSFLMSKNDSSNCNIT*

>PDF26D07

VTVFCFWLLYLILGMYGEDLFISFCDDKQKYGFAAAEDYRKNPNFVFDLIKMSMLPNSKIEADPSWGFTFTE
NAENPLLIQFDNFDGNKKAASPAFLMAMLLKHHLKIKSEIGEKPKELGFWLLDKFKADEKERIKNGIKDACTLL
KVSFVEVNV

>PDF40A16 Possible group-10 or group-10 ortholog

KFEKGIPYFKEIEEFDKISCEVKHFLNGFSIEEKFDNEMKKQESLAEIDCKIEQLVQIAKEVTEKEKNLAEYFYM
NLHGKEMYLQCVENDDEKDEKSVEEKPSLLPIPSTIKLVSSAPNSTNEKYLPKLLKLYDDKINAVGIDLGTSR
CCTAVNRNKNMETVALDNNGERPLPSYVSFDEKDEKCGKIVVDGLLKNLEKFTCFDIKRIIGKKYSNIIYDKSW
PFTVIEKNGKIFVKTANSHGEITKTPEEISAVLLKYIKEVSTFQGKILTEAVLTVPAAFTEKQKEATLKAALAG
WEKIHLLPEPVAASFAYFNNREIPNNSNVLLFDLGGGTLVDVCLFHINDGSLKIKSNGNTCLGGRDIDNLMMRH
FTTALKFKYNINVNKKVKKKYQLLIECQNIKHNLVRESDLLPEKFDSGIEGGSIEIERCELEEMMTELIQRMK
LIIETLENAMDHNEVNVKLLVGGGCRMPIVKTMLKNMFPNADQCCEEQPDEVVAVGAAYAYHLATTNERQ
SEKVEIKKLL

>PDF40K18

TKMFSVLRLLAKSPIRLSQRNVEDIYPCAVTDHVIGVDLGTNTNTRVAVMKNGRKVIENEIGLRKTPSVVAFTEA
GGRLIGAEAKRQAGSNPENTINGVKRIIGRKFQDVQKDLIDVPYKIVKAENGDAWIESRGIGYSPSQITAYLLM
KMKEAAESYLGDYVHHAVITVPPYYSESQREAMYDAGKIAGLKVLRVTSEPGAALFAYGLVKGAREHSSKSE
NGIFAIYDFGGGKFNISYEMQNGIGICESIFTDKTLGGEEFDNRLLCFLVDTFKMEEDIDLSDYPEAMQVRVREA
AEKAKCDLSSVTETCINLPNIIIDASGFKHMIVKISREQFENLVDDLLERTIKLSEKAVVAVGFSSVKEILFIGGMS
RMPKIQELLKKHFGRQPKKGINPEEVVVRGAAFHGAALSGKVPEFARH*

>PDF43N17N

MYNYTASKASDDDIIDGELYEKRRIQMLRDEYIAIQKKTFTKWINSYLVRGGQDEISDLFVDIRDGTMLLKFL
IYSTKLQRPSPKTRIHCCANINISLEFLRIRGIYYENLSSSEDIFDGKPTLILGLIWTIILRSVIEIPKEKSIDQKTIPS
ATEIVLIWCQKMTADYEHVNIKNFTTSWRDGLAFNALIHHRPELIEYDSSLQSNNTIYNLQNALNVAEKYLGISK
LFAEDATECPDNKLIFTYVSTYYNYF

>PDF43N17R

KNLNTAVITVPSEFSDKQKEATKMSAEYAGWQNIHFPEPLAAAYAYFSEIDMPENANILICDCGGGTVDICVGT
VTTNELYVLCYVGDSDLGGRDFDNVLFTHFNIGILLHXYKIDVMQSSKYYLVRQKQCNIKHQLSAADKDWLDV
DDFDCSINEVIQITKLEFEEMTTPLLVRIEEVIRRAVAQSNIAATDINYYVFQVGGGCRMPMLKLLLDTFPAANH
QSSLYPDWIVAHGAALYAYYLKNNVAQNHSRKFLEW*

>PDF52M24

QKQITIKAAKMAEWSPRLLPEPIAAAFAYFNNHEYEENSTLLFDLGGGTLDICLFKVINNSISIINQSGDSFLGG
RDFDNLLFNYYFDRLEHEFGIIVRNDEKKKYKLLAECQKIKQYLSVRNEERLDVDEFAPDNGNTISITRKMFE
RAKPLLFKIRTFITILKESGYQSSQISKILLVGGGCRMPMIKELLKNKFPDAKQCCEEQPPEEVVAVGAAMYAYH
LMTTK

>PDF57M16F Possible group-1 or group-1 ortholog

GKEKKSVALSHDKSGILPNFVLKLLFSSLLSVAENIEKIHRMRFKFILLGDCASGKSSLLHRWIFNRFPERCLS
TIGANFMNKEIDIYKNSVSLQIWDTASQERFKSSIAPFCRGVQCCILVFNLA VNDWGDSSIETLDEWLEFFRY
ETQSPVVLIGNKVDKVDKESRSVSKKEVNLWCSKNNIKAYFEVSAKDGTNVDETLEEIAEAIYNSQANQYYY
LNTGNEYYSVFEKEDNLMFNLLKKNFSDGLFNLENMQYHFPKSRTLIMDFLMLLE

>PDF57M16R* Possible group-1 or group-1 ortholog

LIQKGYWKVYKSIDADKSWQFSITHYFNRAKIGIISDGETYKFPEEISAALLKHVKIKCEEIQGKELNETVITVP
AMFDEIQNEATYAAALLAGWKEIHLLPEPVAAAFAYFIDKPIPSNSKLFDFLGGGTLDICIFKITGEKLEIIGRSG
DPYLGGRDFDNILIEYFREQLLSKYGVTVAENKYYKLMKECQEIKHNLRLDDDKLAVEDYDLTKENDYIPITRI
QFETLAKNLLMLIKSNITAALENAGVKSDEINKVLYVGGGSRMPIIKDLLHETFPNAEHCCEQNPDEVVAVGA
AYYSYHLPSFKTNENRCSVILNLIYA

>PDF75P18F

MSNKTGIFAGIDLGNENSCIAIYKYEKTEVLAGADGSRITPSYVYIGENGEKHVKGAKNYGHKKPERLFYDIK
RHLTMRSEGSSYKKTQWSIIDEAERKFGYFDYYIDGKFTYPMILAEIMKLLSYVGEDVEGVVLTVPAFFSTE
QKNKILKAAEMAGITVLQLICEPTAAAIAYGMEHSYTNKCYLFTLEMDLSIYQLSKWLTKLTKLLFMVVILI

>PDF75P18R

NFKEMVFSYFPNFEREKEALKTAAAIAGFEDVTLDPISAFYAYMNGPNFNNQTLVFDLGGSSLELCVL
KVNDKKIDILQTCSSLNVGGKYFDTVLENYLKEFLKLEKTEPYNLNIEKKQHRLKVDSTTIKEIFEYDTEYEYS
FDNVVTASEEKIPITREKFENLSRDLLLEIQNTVNRTKHWKIDKVLQVGGGCRMSMIKRLQLTEFPNAQHLCH
EFPEEVAIGAAYANNLLNATKYEMTIPQHNA*

>PDF82N23

MSTSVALIGGGILVLLIAGYLAQRNNLIPPPTPKIVGIDLGTTFSSIGVYQAVTGETEILPDSLGRSIPSVVGF
NGTVLIGTRAVEQQEHNPKNTIYDAKRFKTKSDNPQLMSDLKRYPFVVKLDSK GKAYFEVELDSGIRKVT
PEEIGSLIKYLKEIANEKYQTTIPQLVISVPAEFDENQRNYTKKAAELAGLEVRRIVSEPTAAALAYGLHKKKV
EYIVVFDLGGGTLVDSIIWLQGGVFVTQAMAGNNRLGGQDFNERTQKHLLIQVIEKTFNKNIVDKEDIQQLRLAI
EEAKIRLTDVPVTNIRLQLRTVGEFNYQLTRNEFEELNKDLFDSIIDPIEAALADCNLKREDIDEIVLVGGSTRIPK
VRQVVGSYFGKAPNFGIDPELAVVTGA AVQAGVIGGGWPLEVTAMELPTNRRKVHLYTHNSEA

>PDF88D19

REACEALKIALSHPAKASETIDLDDVAPGTPDEDLTYKQFKEIVANLTRRCRKLCFDALEETELKADDIDEVLLV
GGSSKMRVIKDMLKEVFPTKELSEAINPDEAVAYGATLRAAQLLDPEKSKGFGIVDSLAIGIGVALAENRYHFLI
KRNTPIPTKFGPETYSTVYNNQTAMTFNIYEGERLLADRNFHIMGFELQGLPKKRAEEVKATLELELDGNGILK
AIAKGDGKEATQQVNHNEKKATGKKIEDMLADMEINCDRDREKDRTNAAARMEIIKTSI

>PDF90H19

LNAIGIDLGTSECCAFVIRNRNGPEGVVLDTVTNQRNMPSTVAINEMNLPCGQNVLNRMVTKSEYSAFDAKFL
MGKELEEIVDPLWPFVEVISYCEEIYITFGDKSFPWIRNSVDISSCLLCHIKTKAEEFQGRMLEEAVITVPSSFTE
GKDATIDAATYNSTWRLVKLLPEPVAALFAYFYETEIPNGSTVFLFDCGGGTTDICIAKIIGNKINILSEKGDPLF
GGKNFDRILISYFNSVLNHKYGLNVLETNNKYRLMVKCQEIKHTLSVQTDADLFVDDFKTDENDVIPITREEFE
CMAADLICHAKKLIVESLSKAGINPDEINIVFQAGGGCRMQMIKQMLRDMFPAQHQC SIHLEELVAKGAALY
SYELKIERKIKERMFGK

>PDF96I08 possibly group-1 or group-1 ortholog

MMNKPKIIGIDLGTTFSCVGVFEYKCEIANGQGERTTPSVVGFIDGERPVGEYPKKKMYKYPNSNVISCVKR
LIGRKFDDPNVQKDIPNLSYKVVSKAGNAAIEIENGKPKIYTPEEISAMILLDLKRTATKYLGCQMDDTIGAVITI
PAYFNDSQRQATIDAAKIAGLNLVLRINEPTAAALAYGYRQKWKEGIIILVYNLGGGTFDVSIIKVTNGCCEVLAV
DGDDHLGGEDFDNILVKYCIEEFRRKHGHDISNNRRAICRLKAVCEAAKRLCNC SHAPIEVENLFGGDDLNC
KITVARFNQLSKELIEKTVELVKKVLEKAKLSKNDITNVLVGGSTRIPLIEKMLKEFFDQKNLNFDPINPDEAVAN
GVTILAAHLSSSCFDTSVQNIKLLDVIPRSLGIRIEIDSIKNIFSVVIKRCRTRFPCEITKGFAAFYQTNADIDVYE
GEDPVSDRNRLLSFVLRNISPAPIGRPKADVIFKIDENCILTVAVDQQNGNKDSIEILPDKGRLTESQIFEMIH
EICPPPMEIDIEDD*

>PDF98M19F

MALSAENLERFKLNPTGPAIGIDLGTNSCVGYFVNNNVEIITTAAGKRTVPSYVFYNNENEGCIIGEQAIAIRLK
TNPNHVVYDSKRMIGLNYDDNVVNRNKSFWTFTVTKSDNNRPIYDIDKNHQVLPEEVSSEILKELIKMAQDKI
GTEKIKSAVITVPDHFLVGQKEATIHAAGLAGIENVKLITEPTAAAFAYGFDHCRFDGYNLFDLGGGTCDVSI
VKVEKGEFKVIGHAGDTQLGGRDFDNHLIEYFDKHKHDLRVFESTDEIITKRKMRLREACEALK

>PDF98M19R

FNKTMFKAMFRCLEETELKADDIDEVLLVGGSSKMRVIKDMLKEVFPTKELSEAINPDEAVAYGATLRAAQLLD
PEKSKGFGIVDSLAIGIGVALAENRYHFLIKRNTPIPTKFGPETYSTVYNNQTAMTFNIYEGERLLADRNFHIMG
FELQGLPKKRAEEVKATLELELDGNGILKAIKGDGKEATQQVNHNEKKATGKKIEDMLADMEINCDRDREKDR
RTNAARMEIKNINFIKWDCEEKPKKPRAKELDGLLKECKEVEKWMSSNNAALTPEREQFEKIEKDAKRLLR
SS*