>Homo sapiens Isoform 1 MAASELYTKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKDLEYHLDPKTKELP HLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGNADNFNYTKQGGSPVIEGVD DAKEMAHTRQACTLLGISESHQMGIFRILAGILHLGNVGFTSRDADSCTIPPKHEPLCIF CDLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFNWIVDNVN QALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCALFEK PRLSNKAFIIQHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAIS PTSATSSGRTPLTRTPAKPTKGRPGQMAKEHKKTVGHQFRNSLHLLMETLNATTPHYVRC IKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVL SDRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGW LLRKKYLRMRKAAITMQRYVRGYQARCYAKFLRRTKAATIIQKYWRMYVVRRRYKIRRAA TIVLQSYLRGFLARNRYRKILREHKAVIIQKRVRGWLARTHYKRSMHAIIYLQCCFRRMM AKRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLVEKLTNLEGIYNSE TEKLRSDLERLQLSEEEAKVATGRVLSLQEEIAKLRKDLEQTRSEKKCIEEHADRYKQET EQLVSNLKEENTLLKQEKEALNHRIVQQAKEMTETMEKKLVEETKQLELDLNDERLRYQN LLNEFSRLEERYDDLKEEMTLMVHVPKPGHKRTDSTHSSNESEYIFSSEIAEMEDIPSRT EEPSEKKVPLDMSLFLKLQKRVTELEQEKQVMQDELDRKEEQVLRSKAKEEERPQIRGAE LEYESLKRQELESENKKLKNELNELRKALSEKSAPEVTAPGAPAYRVLMEQLTSVSEELD VRKEEVLILRSQLVSQKEAIQPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNR SSALDYHELNEDGELWLVYEGLKQANRLLESQLQSQKRSHENEAEALRGEIQSLKEENNR QQQLLAQNLQLPPEARIEASLQHEITRLTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKI GELEVGQMENISPGQIIDEPIRPVNIPRKEKDFQGMLEYKKEDEQKLVKNLILELKPRGV AVNLIPGLPAYILFMCVRHADYLNDDQKVRSLLTSTINSIKKVLKKRGDDFETVSFWLSN TCRFLHCLKQYSGEEGFMKHNTSRQNEHCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENI LQPMIVSGMLEHETIQGVSGVKPTGLRKRTSSIADEGTYTLDSILRQLNSFHSVMCQHGM DPELIKQVVKQMFYIIGAITLNNLLLRKDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGA KETLEPLIQAAQLLQVKKKTDDDAEAICSMCNALTTAQIVKVLNLYTPVNEFEERVSVSF IRTIQMRLRDRKDSPQLLMDAKHIFPVTFPFNPSSLALETIQIPASLGLGFISRV

>Equus caballus MFFLFVFQFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKDLEYRLDPKTKELPH LRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYGE DIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYFA TVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMRT YLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGDANNFHYTMQGGSPEIEGVDD AKEMANTRQACTLLGISESYQMGIFRILAGILHLGNVGFTSRDSDSCTIPPKHEPLSIFC DLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFSWIVDHVNQ ALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKEQ IPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCALFEKP RLSNKAFIIQHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAISP TSATSSGRTPLTRTPVKPTKGRPGQMAKEHKKTVGHQFRNSLHLLMETLNATTPHYVRCI KPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVLS DRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGWL LRKKYLRMRKAAITVQRYVRGYQARCYAKFLRRTKAATIIQKYWRMYIVRKRYKIKRTAT IVLQSYLRGYLARNRYRKILREHKAVIIQKWVRGWLARTYYKRSMHAIIYLQCCFRRMMA RRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLMEKLTNLEGIYNSET EKLRNDLERLQLSEEEAKIATGRVLSLQEEIAKLRKDLEQTQSEKKSIEERADRYKQETE QLVSNLKEENTLLKQEKEALNHLIVEQAKEMTETMEKKLVEETKQLELDLNDERLRYQNL LNEFSRLEERYDDLKEEMTLMVNVPKPGHKRTDSTHSSNESEYTFSSEITETEDIPSRTE EPSEKKVPLDMSLFLKLQKRVTELEQEKQVMQDELDRKEEQVLRSKAKEEERPQIRGAEL EYESLKRQELESENKKLKNELNELRKALSEKSAPEVTAPGAPAYRVLMEQLTSVSEELDV RKEEVLILRSQLVSQKEAIQPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNRS SAMDCHELNEDGELWLVYEGLKQANRLLESQLQSQKRSHENEAEALRGEIQSLKEENNRQ QQLLAQNLQLPPEARIEASLQHEITRLTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKIG ELEVGQMENISPGQIIDEPIRPVNIPRKEKXFQGMLEYKKEDEQKLVKNLILXXXXXADY LNDDQKVRSLLTSRINSIKKVLKKRGDDFETVSFWLSNTCRFLHCLKQYSGEEGFMKHNT SRQNEHCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENILQPMIVSGMLEHETIQGVSGVK PTGLRKRTSSIADEGTYTLDSILRQLNSFHSVMCQHGMDPELIKQVVKQMFYIVGAITLN NLLLRKDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGAKETLEPLIQAAQLLQVKKKTDD DAEAICSMCNALTTAQIVKVLNLYTPVNEFEERVSVSFIRTIQMRLRDRKDSPQLLMDAK HIFPVTFPFNPSSLALETIQIPASLGLGFISRV

>Pan troglodytes MAASELYTKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKDLEYHLDPKTKELP HLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGNADNFNYTKQGGSPVIEGVD DAKEMAHTRQACTLLGISESHQMGIFRILAGILHLGNVGFTSRDADSCTIPPKHEPLCIF CDLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFNWIVDNVN QALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCALFEK PRLSNKAFIIQHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAIS PTSATSSGRTPLTRTPAKPTKGRPGQMAKEHKKTVGHQFRNSLHLLMETLNATTPHYVRC IKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVL SDRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGW LLRKKYLRMRKAAITVQRYVRGYQARCYAKFLRRTKAATIVQKYWRMYVVRRRYKIRRAA TIVLQSYLRGFLARNRYSKILREHKAVIIQKRVRGWLARTHYKRSMHAIIYLQCCFRRMM AKRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLVEKLTNLEGIYNSE TEKLRSDLERLQLSEEEAKVATGRVLSLQEEIAKLRKDLEQTRSEKKCIEEHADRYKQET EQLVSNLKEENTLLKQEKEALNHRIVQQAKEMTETMEKKLVEETKQLELDLNDERLRYQN LLNEFSRLEERYDDLKEEMTLMVHVPKPGHKRTDSTHSSNESEYIFSSEIAEMEDIPSRT EEPSEKKVPLDMSLFLKLQKRVTELEQEKQVMQDELDRKEEQVLRSKAKEEERPQIRGAE LEYESLKRQELESENKKLKNELNELRKALSEKSAPEVTAPGAPAYRVLMEQLTSVSEELD VRKEEVLILRSQLVSQKEAIQPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNR LLESQLQSQKRSHENEAEALRGEIQSLKEENNRQQQLLAQNLQLPPEARIEASLQHEITR LTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKIGELEVGQMENISPGQIIDEPIRPVNIP RKEKDFQGMLEYKKEDEQKLVKNLILELKPRGVAVNLIPGLPAYILFMCVRHADYLNDDQ KVRSLLTSTINSIKKVLKKRGDDFETVSFWLSNTCRFLHCLKQYSGEEGFMKHNTSRQNE HCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENILQPMIVSGMLEHETIQGVSGVKPTGLR KRTSSIADEGTYTLDSILRQLNSFHSVMCQHGMDPELIKQVVKQMFYIIGAITLNNLLLR KDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGAKETLEPLIQAAQLLQVKKKTDDDAEAI CSMCNALTTAQIVKVLNLYTPVNEFEERVSVSFIRTIQMRLRDRKDSPQLLMDAKHIFPV TFPFNPSSLALETIQIPASLGLGFISRV

>Macaca mulatta MAASELYTKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKDLEYRLDPKTKELP HLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGNADDFNYTQQGGSPVIEGVD DAKEMAHTRQACTLLGISESHQMGIFRILAGILHLGNVGFTSRDADSCTIPPKHEPLCIF CDLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFNWIVDNVN QALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCTLFEK PRLSNKAFIIQHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAIS PTSATSSGRTPLTRIPAKPIKGRPGQMAKEHKKTVGHQFRNSLHLLMETLNATTPHYVRC IKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVL SDRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGW LLRKKYLRMRKAAITVQRYVRGYQARWFVVCRRYKIRRAATIVLQSYLRGFLARNRYRKI LREHKAVIIQKRVRGWLARTHYKRSMHAIIYLQCCFRRMMAKRELKKLKIEARSVERYKK LHIGMENKIMQLQRKVDEQNKDYKCLVEKLTNLEGIYNSETEKLRSDLERLQLSEEEAKV ATGRVLSLQEEIAKLRKDLEQTRSEKKCIEERADQYKQETEQLVSNLKEENTLLKQEKEA LNHRIVEQAKEMTETMEKKLVEETKQLELDLNDERLRYQNLLNEFSRLEERYDDLKEEMT LMVHVPKPGHKRTDSTHSSNESEYTFSSEIAEMEDIPSRTEEPSEKKVPLDMSLFLKLQK RVTELEQEKQVMQDELDRKEEQVLRSKAKEEERPQIRGAELEYESLKRQELESENKKLKN ELNELRKALSEKSAPEVTAPGAPAYRVLMEQLTSVSEELDVRKEEVLILRSQLVSQKEAI HPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNRSSALDYRELNEDGELWLVYE GLKQANRLLESQLQSQKRSHENEAEALRGEIQSLKEENNRQQQLLAQNLQLPPEARIEAS LQHEITRLTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKIGELEVGQMENISPGQIIDEP IRPVNIPRKEKDFQGMLEYKKEDEQKLVKNLILELKPRGVAVNLIPGLPAYILFMCVRHA DYLNDDQKVRSLLTSTINSIKKVLKKRGDDFETVSFWLSNTCRFLHCLKQYSGEEGFMKH NTSRQNEHCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENILQPMIVSGMLEHETIQGVSG VKPTGLRKRTSSIADEGTYTLDSILRQLNSFHSVMCQHGMDPELIKQVVKQMFYIVGAIT LNNLLLRKDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGAKETLEPLIQAAQLLQVKKKT DDDAEAICSMCNALTTAQIVKVLNLYTPVNEFEERVSVSFIRTIQMRLRDRKDSPQLLMD AKHIFPVTFPFNPSSLALETIQIPASLGLGFISRV

>Canis lupus familiaris MGTLRMECRSAVSLIPKVSDASEKLLLGPTPQNSLTDKVQVSEISSESSALIRNLLNVAR GHKKKDDWYLFTFAGIGVIPKKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKD LEYRLDPKTKELPHLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVL VAINPYEQLPIYGEDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGA GKTVSAKYAMRYFATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIG FDKRYRIIGANMRTYLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGNADNFHY TKQGGSPVIEGVDDTKEMAHTRQACTLLGISESYQMGIFRILAGILHLGNVAFTSRDSDS CTIPPKHEPLSIFSDLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHI YAKLFNWIVDHVNQALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNM HVFKLEQEEYMKEQIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKL YNTHLNKCALFEKPRLSNKAFIIQHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKM LPELFQDDEKAISPTSATSSGRMPLSRTPAKPTKGRPGQTAKEHKKTVGHQFRNSLHLLM ETLNATTPHYVRCIKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFF SRYRVLMKQKDVLSDRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLR AACIRIQKTIRGWLLRKKYLRMRKAAITVQRYVRGYQARCYAKFLRRTKAATIIQKYWRM YIVRRKYKIRRTATIVLQSYLRGYLARNRYRKMLREHKAVIIQKWVRGWLARTRYKRSMH AIIYLQCCFRRMMAKRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLM EKLTTLEGIYNSETEKLRSDLERLQLSEEEAKVATGRVLSLQEEIAKLRKDLEQTQSEKK SIEERADKYKQETEQLVSNLKEENTLLKQEKEALNHLIVEQAKEMTETMEKKLVEETKQL ELDLNDERLRYQNLLNEFSRLEERYDDLKEEMTLMVNVPKPGHKRTDSTHSSNESEYTFS SEIAETEDMPLRTEEPSEKKVPLDMSLFLKLQKRVTELEQEKQVMQDELDRKEEQVLRSK AKEEERPQIRGAELEYESLKRQELESENKKLKNELNELRKALSEKSAPEVTAPGAPAYRV LMEQLTSVSEELDVRKEEVLILRSQLVSQKEAIQHKDDKNTMTDSTILLEDVQKMKDKGE IAQAYIGLKETNRSPAMDCHELNEDGELWLVYEGLKQANRLLESQLQSQKRSHENEAEAL RGEIQSLKEENNRQQQLLAQNLQLPPEARIEASLQHEITRLTNENLDLMEQLEKQDKTVR KLKKQLKVFAKKIGELEVGQMENISPGQIIDEPIRPVNIPRKEKDFQGMLEYKKEDEQKL VKNLILELKPRGVAVNLIPGLPAYILFMCVRHADYLNDDQKVRSLLTSTINSIKKVLKKR GDDFETVSFWLSNTCRFLHCLKQYSGEEGFMKHNTSRQNEHCLTNFDLAEYRQVLSDLAI QIYQQLVRVLENILQPMIVSGMLEHETIQGVSGVKPTGLRKRTSSIADEGTYTLDSILRQ LNSFHSVMCQHGMDPELIKQVVKQMFYIVGAITLNNLLLRKDMCSWSKGMQIRYNVSQLE EWLRDKNLMNSGAKETLEPLIQAAQLLQVKKKTDDDAEAICSMCSALTTAQIVKVLNLYT PVNEFEERVSVSFIRTIQMRLRDRKDSPQLLMDAKHIFPVTFPFNPSSLALETIQIPASL GLGFISRV

>Bos taurus MAASELYTKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLQLEDGKDLEYRLDPKTKELP HLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASADLSEFKVLRLGDANNFHYTNQGGSPVIEGVD DAKEMAHTRQACTLLGISESHQMGIFRILAGILHLGNVVFMSRDSDSCTIPPKHEPLSIF CDLMGVDFEELCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFNWIVDHVN QALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCALFEK PRLSNKAFIIQHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAIS PTSATSSGRTPLTRTLSKPTKGRPGQTAKEHKKTVGHQFRNSLHLLMETLNATTPHYVRC IKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVL SDRKQTCKNVLEKLIVDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGW LLRKKYLRMRKAAITVQRYVRGHQARCYAKFLRRTKAATIIQKYWRMYVARRRYKIMRTA TIVLQSYLRGYLARNRYHKILREHKAVIIQKWVRGWLARTCYRRSIHAIIYLQCCFRRMM AKRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLMEKLTNLEGIYNSE TEKLRSDLERLQLSEEEAKIATGRVLSLQEEIAKLRKDLEQTQSEKKSIEEHADRYKQET EQLVSNLKEENTLLKQEKEVLNHRIVEQAKEMTETMEKKLVEETKQLELDLNDERLRYQN LLNEFSRLEERYDDLKEEMTLMVNVPKPGHKRTDSTHSSNESEYTFSSEIAETEDIPSRT EEPSEKKVPLDMSLFLKLQKRVTELEQEKQVMQDELDRKEEQVLRSKAKEEERPQIRGAE LEYESLKRQELESENKKLKNELNELRKALSEKSAPEVTAPGAPAYRVLMEQLTSVSEELD VRKEEVLILRSQLVSQKEAIQPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNR PSAMDCHELNEDGELLLVYEGLKQANRLLESQLQSQKRSHENEAEALRGEIQSLKEENNR QQQLLAQNLQLPPEARIEASLQHEITRLTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKI GELEVGQMENISPGQIIDEPIRPVNIPRKEKDFQGMLEYKKEDEQKLVKNLILELKPRGV AVNLIPGLPAYILFMCVRHADYLNDDQKVRSLLTSTINSIKKVLKKRGDDFETVSFWLSN TCRFLHCLKQYSGEEGFMKHNTSRQNEHCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENI LQPMIVSGMLEHETIQGVSGVKPTGLRKRTSSIADEGTYTLDSILRQLNSFHSVMCQHGM DPELIKQVVKQMFYIVGAVTLNNLLLRKDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGA KETLEPLIQAAQLLQVKKKTDDDAEAICSMCNALTTAQIVKVLNLYTPVNEFEERVSVSF IRTIQMRLRDRKDSPQLLMDAKHIFPVTFPFNPSSLALETIQIPASLGLGFISRV

>Mus musculus MAASELYTKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKDLEYRLDPKTGELP HLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGNADSFHYTKQGGSPMIEGVD DAKEMAHTRQACTLLGISESYQMGIFRILAGILHLGNVGFASRDSDSCTIPPKHEPLTIF CDLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFNWIVDHVN QALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCALFEK PRMSNKAFIIKHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAIS PTSATSSGRTPLTRVPVKPTKGRPGQTAKEHKKTVGHQFRNSLHLLMETLNATTPHYVRC IKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVL GDRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGW LLRKRYLCMQRAAITVQRYVRGYQARCYAKFLRRTKAATTIQKYWRMYVVRRRYKIRRAA TIVIQSYLRGYLTRNRYRKILREYKAVIIQKRVRGWLARTHYKRTMKAIVYLQCCFRRMM AKRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLMEKLTNLEGVYNSE TEKLRNDVERLQLSEEEAKVATGRVLSLQEEIAKLRKDLEQTRSEKKSIEERADKYKQET DQLVSNLKEENTLLKQEKETLNHRIVEQAKEMTETMERKLVEETKQLELDLNDERLRYQN LLNEFSRLEERYDDLKEEMTLMLNVPKPGHKRTDSTHSSNESEYTFSSEFAETEDIAPRT EEPIEKKVPLDMSLFLKLQKRVTELEQEKQLMQDELDRKEEQVFRSKAKEEERPQIRGAE LEYESLKRQELESENKKLKNELNELRKALSEKSAPEVTAPGAPAYRVLMEQLTSVSEELD VRKEEVLILRSQLVSQKEAIQPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNR LLESQLQSQKRSHENEAEALRGEIQSLKEENNRQQQLLAQNLQLPPEARIEASLQHEITR LTNENLYFEELYADDPKKYQSYRISLYKRMIDLMEQLEKQDKTVRKLKKQLKVFAKKIGE LEVGQMENISPGQIIDEPIRPVNIPRKEKDFQGMLEYKREDEQKLVKNLILELKPRGVAV NLIPGLPAYILFMCVRHADYLNDDQKVRSLLTSTINSIKKVLKKRGDDFETVSFWLSNTC RFLHCLKQYSGEEGFMKHNTSRQNEHCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENILQ PMIVSGMLEHETIQGVSGVKPTGLRKRTSSIADEGTYTLDSILRQLNSFHSVMCQHGMDP ELIKQVVKQMFYIVGAITLNNLLLRKDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGAKE TLEPLIQAAQLLQVKKKTDDDAEAICSMCNALTTAQIVKVLNLYTPVNEFEERVSVSFIR TIQMRLRDRKDSPQLLMDAKHIFPVTFPFNPSSLALETIQIPASLGLGFIARV

>Rattus norvegicus MAASELYTKFARVWIPDPEEVWKSAELLKDYKPGDKVLLLHLEEGKDLEYRLDPKTSELP HLRNPDILVGENDLTALSYLHEPAVLHNLRVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASAKLPEFKMLRLGNADSFHYTKQGGSPMIEGVD DAKEMAHTRQACTLLGISESYQMGIFRILAGILHLGNVGFASRDSDSCTIPPKHEPLIIF CDLMGVDYEEMCHWLCHRKLATATETYIKPISKLQATNARDALAKHIYAKLFNWIVGHVN QALHSAVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIESKLGILDLLDEECKMPKGTDDTWAQKLYNTHLNKCALFEK PRMSNKAFIIKHFADKVEYQCEGFLEKNKDTVFEEQIKVLKSSKFKMLPELFQDDEKAIS PTSATSSGRTPLTRVPVKPTKGRPGQTAKEHKKTVGLQFRNSLHLLMETLNATTPHYVRC IKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDVL GDRKQTCQNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKLRADKLRAACIRIQKTIRGW LLRKRYLCMQRAAITVQRYVRGYQARCYAKFLRRTKAATTIQKYWRMYVVRRKYKIRRAA TIVLQSYLRGYLARNRYRKILREHKAVIIQKRVRGWLARTHYKRTMKAIIYLQCCFRRMM AKRELKKLKIEARSVERYKKLHIGMENKIMQLQRKVDEQNKDYKCLMEKLTNLEGVYNSE TEKLRNDVERLQLSEEEAKVATGRVLSLQEEIAKLRKDLEQTRSEKKSIEERADKYKQET EQLVSNLKEENTLLKQEKETLNHLMVEQAKEMTETMERKLVEETKQLELDLNDERLRYQN LLNEFSRLEERYDDLKEEMTLMLNVPKPGHKRTDSTHSSNESEYTFSSEFAETEDIAPRT EEPTEKKVPLDMSLFLKLQKRVTELGQEKQLMQDELDRKEEQVLRSKAKGGERPQIRGAE LGYESLKRQELESENKKLKNELNELRKALSEKSAPEVNAPGAPAYRVLMEQLTAVSEELD VRKEEVLILRSQLVSQKEAIQPKDDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETNR LLESQLQSQKRSHENEAEALRGEIQSLKEENNRQQQLLAQNLQLPPEARIEASLQHEITR LTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKIGELEVGQMENISPGQIIDEPIRPVNIP RKGKDFQGMLEYKREDEQKLVKNLILELKPRGVAVNLISGLPAYILFMCVRHADYLDDDQ KVRSLLTSTINSIKKVLKKRGDDFETVSFWLSNTCRFLHCLKQYSGEEGFMKHNTSRQNE HCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENILQPMIVSGMLEHETIQGVSGVKPTGLR KRTSSIADEGTYTLDSILRQLNSFHSVMCQHGMDPELIKQVVKQMFYIVGAITLNNLLLR KDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGAKETLEPLIQAAQLLQVKKKTDDDAEAI CSMCNALTTAQIVKVLNLYTPVNEFEERVSVSFIRTIQVRLRDRKDSPQLLMDAKHIFPV TFPFNPSSLALETIQIPASLGLGFIARV

>Gallus gallus MAASELYTKYARVWIPDPEEVWKSAELLKDYKPGDKVLQLRLEEGKDLEYCLDPKTKELP PLRNPDILVGENDLTALSYLHEPAVLHNLKVRFIDSKLIYTYCGIVLVAINPYEQLPIYG EDIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQSIIVSGESGAGKTVSAKYAMRYF ATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSSRFGKYIEIGFDKRYRIIGANMR TYLLEKSRVVFQAEEERNYHIFYQLCASAALPEFKTLRLGNANYFHYTKQGGSPVIDGID DAKEMVNTRQACTLLGISDSYQMGIFRILAGILHLGNVEFASRDSDSCAIPPKHDPLTIF CDLMGVDYEEMAHWLCHRKLATATETYIKPISKLHAINARDALAKHIYANLFNWIVDHVN KALHSTVKQHSFIGVLDIYGFETFEINSFEQFCINYANEKLQQQFNMHVFKLEQEEYMKE QIPWTLIDFYDNQPCINLIEAKMGVLDLLDEECKMPKGSDDTWAQKLYNTHLNKCALFEK PRLSNKAFIIKHFADKVEYQCEGFLEKNKDTVYEEQIKVLKSSKKFKLLPELFQDEEKAI SPTSATPSGRVPLSRTPVKPAKARPGQTSKEHKKTVGHQFRNSLHLLMETLNATTPHYVR CIKPNDFKFPFTFDEKRAVQQLRACGVLETIRISAAGFPSRWTYQEFFSRYRVLMKQKDV LSDRKQTCKNVLEKLILDKDKYQFGKTKIFFRAGQVAYLEKIRADKLRAACIRIQKTIRG WLMRKKYMRMRRAAITIQRYVRGHQARCYATFLRRTRAAIIIQKFQRMYVVRKRYQCMRD ATIALQALLRGYLVRNKYQMMLREHKSIIIQKHVRGWLARVHYHRTLKAIVYLQCCYRRM MAKRELKKLKIEARSVERYKKLHIGLENKIMQLQRKIDEQNKEYKSLLEKMNNLEITYST ETEKLRSDVERLRMSEEEAKNATNRVLSLQEEIAKLRKELHQTQTEKKTIEEWADKYKHE TEQLVSELKEQNTLLKTEKEELNRRIHDQAKEITETMEKKLVEETKQLELDLNDERLRYQ NLLNEFSRLEERYDDLKDEMNLMVSIPKPGHKRTDSTHSSNESEYTFSSEITEAEDLPLR MEEPSEKKAPLDMSLFLKLQKRVTELEQEKQSLQDELDRKEEQALRAKAKEEERPPIRGA ELEYESLKRQELESENKKLKNELNELQKALTETRAPEVTAPGAPAYRVLLDQLTSVSEEL EVRKEEVLILRSQLVSQKEAIQPKEDKNTMTDSTILLEDVQKMKDKGEIAQAYIGLKETN RLLESQLQSQKKSHENELESLRGEIQSLKEENNRQQQLLAQNLQLPPEARIEASLQHEIT RLTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKIGELEVGQMENISPGQIIDEPIRPVNI PRKEKDFQGMLEYKKEDEQKLVKNLILELKPRGVAVNLIPGLPAYILFMCVRHADYLNDD QKVRSLLTSTINGIKKVLKKRGDDFETVSFWLSNTCRFLHCLKQYSGEEGFMKHNTPRQN EHCLTNFDLAEYRQVLSDLAIQIYQQLVRVLENILQPMIVSGMLEHETIQGVSGVKPTGL RKRTSSIADEGTYTLDSIIRQLNSFHSVMCQHGMDPELIKQVVKQMFYIIGAVTLNNLLL RKDMCSWSKGMQIRYNVSQLEEWLRDKNLMNSGAKETLEPLIQAAQLLQVKKKTDEDAEA ICSMCNALTTAQIVKVLNLYTPVNEFEERVLVSFIRTIQLRLRDRKDSPQLLMDAKHIFP VTFPFNPSSLALETIQIPASLGLGFISRV

>Danio rerio MAASELYTKYARVWIPDDEEVWRSAELTKDYRQGDGVLQLQLEDGKVSVMAVYKPHFINI TYSAMDLLDLEFKLDPKTNNLPHLRNPDILVGENDLTALSYLHEPAVLHNLKVRFIDSKL IYTYCGIVLVAINPYETLPIYGADIINAYSGQNMGDMDPHIFAVAEEAYKQMARDERNQS IIVSGESGAGKTVSAKYAMRYFATVSGSASEANVEEKVLASNPIMESIGNAKTTRNDNSS RFGKYIEIGFDKKYHIIGANMRTYLLEKSRVVFQADEERNYHIFYQLCASAHLPEFKALK LGKANDFHYTKQGRNPVIDGVDDAKEMSTTRNAFILLGINESYQMGLFQILASILHLGNV DVKDRDSDSSIIPPNNGHLSVFCELMGVTYQDMSHWLCHKKLKTATETYIKPIPKLQAIN ARDALAKHIYAKLFNWIVDHVNKALHSTVKQHSFIGVLDIYGFETFEINSFEQFCINYAN EKLQQQFNMHVFKLEQEEYMKEQIPWTLIDFYDNQPCINLIEAKMGILDLLDEECKMPKG SDDSWAQKLYNTHLKTCALFEKPRMSNKAFIIQHFADKVEYQCDGFLEKNKDTVNEEQIN VLKASKFDLLVELFHDEEKATSPTGAAPGPGGRTRLSVKPDKGKSSQASKEHKKTVGLQF RNSLQLLMETLNATTPHYVRCIKPNDYKHAFTFDPKRAVQQLRACGVLETIRISAAGFPS RWTYQEFFSRYRVLMKQKDVLTDKKMTCKNVLEKLVQDPDKYQFGKTKIFFRAGQVAYLE KLRADKLRAACIRIQKTIRCWLARKKYLRMKHAATTIQRFVRGYQARCLAKFLRRTRAAI IIQKYQRMYIQKTCYKRKQAAALAMQCILRAYMARQLYKALLREHKAVIIQKMVRGWLAR QWFKRSLKAIVYLQCCIRRMRAKRELKKLKIEARSVEHFKKLNIGMENKIMQLQRRIDDQ NKENRSMSERLNTLETSHAVESERMRAEVTRLRGAEEDAKNNANKVTSLLEELERLRKDL QNTQKEKKAIEDWAQTYQDEMEKMISELKEQNQLLKTEKNNLNQLIQEQSQQWTDKMQRA LKEETQQLENDLNEERSRYQNLLTEHLRLEEKYDDLKEEITLAVNVPKPGHRRTDSTHSS NESECTYNSEFAESEEGSRVGEDVSKSILDMSLFLKLQKRVSELEQEKQSLQNELDRREE QFQRARARDDEEHKKARGAELEYESLKRQELESENKKLKHDLNQMRQSLRGSVEAGSGAP GSPAYTVLLDQLNASNEELEVRKEEVLILRSQLVSQKEAMQHKTTMTEPLPYIEDVQKLT DAKEISQAYMGLKDTNRLLESQLQAQRRSHDNEVEVLRGELHSLKEENNRQQQLLAQNLQ LPPEARIEASLQHEITRLTNENLDLMEQLEKQDKTVRKLKKQLKVFAKKINDLEGGQMDV SPGQTADEPVHPVNIPRREKDFQGMLEYKKEDELKLVKNIILELKPRGVAVNLIPGLPAY ILFMCLRHADYINDDQKVRSLLTSVINSIKKILKKRGDDFETVSFWLANTCRFLHCLKQY SGDEQFMKHNSPKQNEHCLSNFDLAEYRQVLSDLAIQIYQQLIKCMENILQPMIVSGMLE HETIQGVSGVKPTGLRKRTSSIADEGTYTLDSIIRQLNTFHSIMCHHGTDPELIKQVVKQ QFYIIGAVTLNNLLLRKDMCSWSKGMQIRYNVSQLEEWLRDKNLMTCGAKETLEPLIQAA QLLQVKKKTDEDAEAICSMCNALSTAQIVKVLNLYTPVNAFEERVSVLFIRTIQTRLRDR KESPQLLMDTKLIYPVTFPFNPSSLALETIQIPSSLNLAFLTRV

>Drosophila melanogaster MSSEEMLYAQGAKIWVPHADLVWESATLEESYRKGAGFLKICTDSGKLKEVKLKADGSDL PPLRNPAILVGQNDLTTLSYLHEPGVLHNLRVRFCERQIIYTYCGIILVAINPYAEMPLY GPSIIRAYRGHAMGDLEPHIFALAEEAYTKLERENCNLSIIVSGESGAGKTVSAKYAMRY FAAVGGSESETQVERKVLASSPIMEAFGNAKTTRNDNSSRFGKFTKLLFRNQMGVMFLQG ATMHTYLLEKSRVVYQAQGERNYHIFYQLCAARSKYPELVLDHQDKFQFLNMGGAPEIER VSDAEQFNETVQAMTVLGFSIQQIADIVKILAGILHLGNIQVSKKFNEGSEEEDSDSCDI FHNDIHLQITADLLRVSADDLRRWLLMRKIESVNEYVLIPNSIEAAQAARDALAKHIYAK LFQYIVGVLNKSLNNGSKQCSFIGVLDIYGFETFEVNSFEQFCINYANEKLQQQFNQHVF KLEQEEYLKEGITWTMIDFYDNQPCIDLIESRLGVLDLLDEECRMPKGSDESWAGKLIGK CNKFPHFEKPRFGTTSFFIKHFSDTVEYDVNGFLEKNRDTVSKELTQVLSESNMSLAKQV MTLEEIDTLCVDSAKSSTLGGRVVISAGRKQQGNDTRRRVVPSKQHRKTVGSQFQESLAS LISTLHATTPHYVRCIKPNDDKVAFKWETAKIIQQLRACGVLETVRISAAGFPSRWLYPD FYMRYQLLVYRSKLDKNDMKLSCRNIVMKWIQDEDKYRFGNTQIFFRAGQVAFLEQVRAN LRKKYITIVQSVVRRFVYRRQFLRIQKVINGIQKHARGYLARERTQKMREARAGLILSKY ARGWLCRRRYLRLRHSISGIQTYARGMLARNKFHAMRDHYRAVQIQRFVRGALARRAYQK RRRNIIICQAAIRRFLARRKFKRMKAEAKTISHMENKYMGLENKIISMQQRIDELNRDNS NLKHKTSEISVLKMKLELKKTLEAEFKNVKAACQDKDKLIEALNKQLEAERDEKMQLLEE NGHAQEEWISQKQTWRQENEELRRQIDEIIDMAKNAEVNQRNQEDRMLAEIDNRELNEAY QRAIKDKEVIENENFMLKEELSRLTAGSFSLHARKASNASSQNEDDVGYASAKNTLDINR PPDLLSKNYSYNDSTSLVVKLRSILEEEKQKHKVLQEQYIKLSSRHKPTEDSFRVSELEV ENEKLRSEYDQLRTSIKHGVEINELNAQHAALQEEVRRRREECIQLKAVLLQQSQSMRSL EPESLQMRGNDVNELMEAFHSQKLINRQLESELKAITEEHNSKLVEMTQEIERLNNEKDE LQKVMFESIDEFEDSNVDTLRQNDRYLRRELQKAVAQFLLVQEELKLANAKLKAYRQDGG QLEHKIEEEMIRNKSNGTSADVGANVTKQKSQNPQGLMKFHSSDLDKILQRLLSALTPRT VVGLLPGFPAYLIFMCIRYTDLTNADDDVRELLSKFVIQIKKMHRTPHPIENRVIWLVNS ITLLNLMKQYGDVDEYVKFNTEKQNQQQLKNFNLFEYRRVILDLIVNLYQALIMQIQGLL DPKIVPAILNNDEIQRGRQAHGMRSRATSIGASSSPEHGGGPAWKQLIGQLEHFYKQFQH FGLDNCYAEQIFHQLLYFICAVALNCLMLRGDICMWETGMIIRYNIGCIEDWVRSKKMSN DVLTALAPLNQVSQLLQSRKSEQDVQTICDLCTSLSTAQVLKVMKSYKLDDYESEITNVF LEKLTEKLNARQMQKSNSDEFTIDQKFIQPFKVVFRYSDIKLEDIELPSHLNLDEFLTKI

>Anopheles gambiae MRYICFEDARVWIPHPETVWEGAVVAQDYKQDDKQLKLVTDRGVEHTVPLKTPADLPPLR NPTILIGQNDLTALSYLHEPDVLYNLEVRFCDRQAIYTYCGIVLVAINPYAELPLYGPDL IRAYRGHAMGELEPHIFAVSEEAYAKLEREKCDISIIVSGESGAGKTVSAKYAMRYFAAV GGSESETQIEKKVLASSPIMEAIGNAKTTRNDNSSRFGKFTKLLFLNNHSMALTGGTMQT YLLEKSRVCFQAPGERNYHIFYQLCAGREQWPELMLDHQDKFHFLNQGQSPNISKLSDRD QFEDTLGALKTLGFDDAEIGDIMKVVASVLHLGNVVFNHRQKSQTSEVDSEACSIASNDL HLNVACDILQLDRSELRKWLVTRQIESMNDSVLIPMNKQTAEATRDALAKHIYAELFQHI VQKINRNLAGSKKQNCCFIGVLDIYGFETFDVNSFEQFCINYANEKLQQQFNQHVFKLEQ EQYLREGIEWKMIDFYDNQPCIDLIESKLGILDLLDEECRMPRGSDDSWVGKLMEKCGKY PHFDRPRFGTSAFLIKHFSDTVQYESRGFLEKNRDTVSRELVSVLKASGMRLCQRLMVAQ EEGGGDGDAKTAPAAGVKIMVSAARTQPMTQKQQRKTVGSQFRESLTQLITTLHNTTPHY VRCIKPNDDKAPFKWEAPKIVQQLRACGVLETVRISAAGFPSRWKYEDFYERYRLLCKRA QIVDWHVKATCTNIVRNWLLDEDKYRLGNTQIFFRAGQVAYLEQVRSDTRKKHIIVVQSL IRRFVCRRRYLRLKQTALGLQRHARGMLARKRADNLRKNRAAIIIQRYTRGWLQRKKYVQ LRTAVLGLQTRARGFMARRKFRAVLDNYKATEVQRFCRGYLARRRYRARLDHIIKCQAAV RRFLARRAFKKLKAEARTVAHIQKMYKGLENKIIELQQRHDVLSKENAALKKQNVEVVEM RQKLDGMKRLEGELKLLQLQLVQKDEKLMLSIRQLEGERDEKMQLLEEKQREEEERARER DAFEQELAKVRREVTEITAVTQIEQARLVSQADTEEIHAAYQRTVKDKDVLENENVALRQ EVRRLQRIAADSHELKTHSRSVSNASSTNEEDYGYTSGRNTLDIRRASPHPYEDPSDSTV GESPEKDQTAIILRMRKLFEEEKSKSEQLRKELARLKKSSTFSTEDSIRASELEVENEKL RQDYNLLRNSIKRGVESREMDAQYGALQEELKRRREECISLKAVLAQQSQSLRSLGQTAN GAETSLRIHDEGELMEAFQAQKLVNRQLESELRAITDANNETLVENNRIIDGLRTENGEL QAILQQHVEQVGEEVDLETVRQNEQYLRHELRKSTAAYVELQEQLNELLAKNNELLKKNN ILSNRLRDHGLNDSILMNDEFHSMVAVVKKQTQSSQGILKYRQEDESKIMQRLVTDLKPR VAVTLAPSLPAYVVFMCIRYTDLVNMDQLVRSLLTRFVQMIKRLYRGANSVEVRVMWLAN TLTLHNLMKQFGGYKDYMKYNTDVQNAQQLKNFDLAEYRQVIHETIISMHSVLIRQVQDS LKQYIVPAILHHDETARGKSRRTMSLDISPEQGRSEPELLVQQLGCVYNHLSSFGLEGCY IEQIFKQLMHYICAVSVNNLMLRGDLCMWKTGMKLRYNMGCLDDWVRKMKMGPDVMKPFL PLNQISSILQARKTEEDVHTLLELSTALSTAQVLKIIKSYKTDDCENQIRPAFIEKLTQQ LNLRSEQRESDTYMMDEELVSPLVVLFKYSEINLEEIDLPPELNLEGLVTKI

>Caenorhabditis elegans MFNYSKIFQIHRACSPNRKKIGSIQYGRRRHSWQGPVVPAAKLQVLIKGVRIWHRHPTLV WIGATLEEDITFQTRNVRIRLEDDTEVEYAIKSLDQLPFLRNPAFLVGKDDLTLLSYLHE PAVLHNLQVRFVKGSSIYTYCGIVLVAINPYADCSHIYGEEIIQVYRGAGKSAREMDPHI FAVAEEAHFDMGAFGKSQSIIVSGESGAGKTVSAKFVMRYLASVAASKTRNGGTTSIEAR VLASNPIMESIGNAKTIRNDNSSRFGKFIQINFCERGRRIVGAEMKTYLLEKSRLVFQAP GERNYHIFYQLCAARNHQVLKDLHLGPCESYSYLTQGGDSRIPGVDDKADFEALLKALQL LGFDEKQMSDVFRLLAGLLLLGNVHFENGEGSSAVSASSCQEISRLCREFWKISESDLRI WLTRREIRAVNEIVTKPLTKNEAVRSRDALTKMLYSHLFGWLVDKINEALNEKDKLDGTN QKKRPDRFIGVLDIYGFETFDVNSFEQFSINYANEKLQQQFNQHVFKLEQEEYIREEIEW VRVDFHDNQPAIDLIEGPVGMINLLDEQCKRLNGSDADWLSQLQNSTELKRNPQLAFPKV RSNDFIVRHFAADVTYSTDGFVEKNRDAIGEQLLDVVVASKFPFIRTVIGSTAPTSVSSS SSSSTPGKRTIKKTVASQFRDSLKELMSVLCSTRPHYVRCIKPNDSKISFDFEPKRAIQQ LRACGVLETVRISAAGFPSRYPYEEFARRYRVIYTKEAALWRDKPKQFAELACQQCLEEG KYAVGKTKIFLRTGQVAVLERVRLDTLAAAATVIQKMWKGFLARRKYETMRRSLLIVQAS LKAFLAFRRIKYLQMHRAVIVMQSAVRGYLERRKYEQIRDSIIGIQAMFKANRVRRYVEK LRYEKSAITIQAAWRGYLARREQIANRKKVVMVQCAVRKWLAKRRLRELKIEARSVGHLQ KLNTGLENKIIELQMRLDIANARTKEEAEKFATASKNLQKTKADLAMMEAERLTLLEARN RVEVLQEEVERLETECDLKEAQRGGMETKMVELQSRLDQMQSESGQTIVELTEQLEKAKA DRVLWDEERQRMEAALNTERSARNALDAEMAAMREQLMKNVDLFESSTFQKRPSQKKNRD DDSCSRTTSNLSQLTGSFTAETINGVHSTSRGSPEVLLDNMASTFEQLRMINDLRQRNEH CQRETERMKAIIEASTLIETLDKKTSLKAFESIRVGELEGAYNRLKNDMERLVSGENGAT HSVFERIMEENERLREEAVELRSMLSSHFEKQSVAGSSGYRRSPRPDSGHCSGADSEDGS SGADLEEDLCIERQCRHLKNLAENLTKMLTNQNLEIERLQQQLRFSESQTVFRPSDCSLD EAVRGAHKQTQLLAQQNMDLNDKLTRQSEELAEARAQLRGYSGPLGLENASDEEIIRLEA FEKGSIKHSGFLEVYNVPEFARIIVCELKPTLARLLTKNLPAYLLVAAFRNHDEKRDETA LTGLFSSVHLVLKDTISRSHDLDLLSLWLVNLWRLFNLLRQYSGEDSQPEWHVANTETQN SYRFKAYDVAPIRDQLKLRIEECYTSLMKKAIEHVLSPKIVPGILQHESSSDLMTAGQER RDRNSGSVESQRKSLDDLLQFMEIVHTKLTTYGGDDIVVKQVIGQMARWMCALALNYMMF RRELCNFEKAIQIKHNVTQIQNWLNAKGLSDCRDHFEPLVQACHLLQSRKDPSNLDTLCG EMTSRLKPRQVVAILQHYDPSDEMEDGLSPEFLVQIQKKLNERAIANNDPIEDKDKLIML GTYLPPFDTQPFSYSDFPLETLSLPSCLHMQSVCRLV

>Schizosaccharomyces pombe MSHARLSVGSECWVSNNNGHWDAARLIEIKDNGGGKVVATVAKSSGVLETVNYQQLQNRN IGQSESPSDLTNLPYLNEPSVLHALHNRYNNKQIYTYSGIVLVSINPYQNLPEFYNDNLI KHFHKDPEAAKVPHLYSIASSCYHALTTDSKNQTIIVSGESGAGKTVAAKYIMRYLTSVQ GVDHNGVVKRSVENQVLATNPIMEAFGNAKTIRNDNSSRFGKYVTISFDENLLITGANVN TYLLERSRVVSLLKGERNYHIFYQLITGCTEEQRDKWFLESASSFNYLSQGNCDEISGVD DSNDFTITCRALSTIGISESRQEDVFCLLAALLHLGNIEVCATRNEAQIQPGDGYLQKAA LLLGVDSSTLAKWIVKRQLKTRSETIITSSTLEHAISIRDSVAKYLYSALFLWIVHMINA SLDHNKVKRAAYKYIGVVDIYGFEHFEKNSMEQFCINYANEKLQQEFNKHVFKLEQEEYV KEGLDWRLIEYSDNQGCISLIEDKLGILSLLDEECRLPSGNHQSFLQKLNNQLPTKHSQF YKKSRFNDGSFMVKHYALDVSYQVHDFLAKNSDAIPDEFISLLQNSKNEFITYLLDFYMQ LVSSQNKNPRKTAISRKPTLSSMFKSSLSQLMTTVSSTNVHYIRCIKPNEEKLPWTFSPP MVLSQLRACGVFETIRISSLGFPARFSYEEFAHRFRILLSSKEWEEDNKKLTLNIVNSVI PHDNLNFQVGRSKIFFRSNVIGNFEEAHRATCSKSTVLLQSAIRGFFTRKEYQRTVKFII KLQSVIMGWLTRQRFEREKIERAAILIQAHWRSYIQRKRYLSLIKCAIVIQSIVRKNIAY SRYINELRESSATLLAKFWRAYNARKTFRGLKKSVIALQCVSRSVLTRRYLRRLQDSAGR TSILYEKQKNLQASITEVSKQLKSNSKKVTVLRNKLNILNNSLSKWKCLIKKPSDFSEPV SMDFTSNDEQLVQLLQAESKLRQASQQLYMAAKKSELGFVQSQTARENLSNYYQALQMTV SEKFEYDTEQLPSRVLFYAMDRYFSIHKKLKQLLELVGVENASLLPNEVVNKQTKDLLYE KRVVFLKQIKQALTVSSLFNAVGYKDGVMRLLETDQNSLLFAGVVNFLIFAGISLDLKTQ ISEFLSQLCSYFTKIVDGTVIENDKTLDFYEKPLQAVLYWFATLHKIRSFLVHLLSINSH GKQSVVEDLWNPLILKFSKHFSNLENSFHSLVQKLLSCCTEGSINALLNSKCLPEFIDAA DENTTPTGMNIYELIDRMNLIHKLLISSALQPNLLELTISHMLQHIGQRAFQTLIHGRSP YTWKSASQVSYNASLLINWCHQKGISYVNSSLLPLMQSPLVFCLRKNDANDLDVILSVCN LLSPFEVVCLLNRYQPCAGENPLPKSFSKAVEALSCKYKQSGFTNGKITNTNGHAIPIAA SKNPLLSLENNHIYEELRLSELINLLAKATL

>Arabidopsis thaliana MAASAKVTVGSHVWVEDPDDAWIDGEVEEVNSEEITVNCSGKTVVAKLNNVYPKDPEFPE LGVDDMTKLAYLHEPGVLLNLKCRYNANEIYTYTGNILIAVNPFKRLPHLYGSETMKQYK GTAFGELSPHPFAVADSAYRKMINEGVSQAILVSGESGAGKTESTKMLMQYLAYMGGRAE SEGRSVEQQVLESNPVLEAFGNAKTVRNNNSSRFGKFVEIQFDQRGRISGAAIRTYLLER SRVCQVSDPERNYHCFYMLCAAPEQETERYKLGKPSTFRYLNQSNCYALDGLDDSKEYLA TRKAMDVVGINSEEQDGIFRVVAAILHLGNIEFAKGEESEASEPKDEKSRFHLKVAAELF MCDGKALEDSLCKRVMVTRDESITKSLDPDSAALGRDALAKIVYSKLFDWLVTKINNSIG QDPNSKHIIGVLDIYGFESFKTNSFEQFCINLTNEKLQQHFNQHVFKMEQEEYTKEEIDW SYIEFIDNQDVLDLIEKKPGGIIALLDEACMFPRSTHDTFAQKLYQTFKNHKRFGKPKLA QTDFTICHYAGDVTYQTELFLDKNKDYVVGEHQALLSSSDCSFVSSLFPPLPEESSKTSK FSSIGSQFKQQLQSLLESLSTTEPHYIRCVKPNNLLKPDIFENINILHQLRCGGVMEAIR ISCAGYPTRKPFNEFLTRFRILAPETTKSSYDEVDACKKLLAKVDLKGFQIGKTKVFLRA GQMAEMDAHRAEVLGHSARIIQRNVLTYQSRKKFLLLQAASTEIQALCRGQVARVWFETM RREAASLRIQKQARTYICQNAYKTLCSSACSIQTGMRAKAARIELQLRKKRRATIIIQSQ IRRCLCHQRYVRTKKAAITTQCGWRVKVARRELRNLKMAAKETGALQDAKTKLENQVEEL TSNLELEKQMRMEIEEAKSQEIEALQSVLTDIKLQLRDTQETKSKEISDLQSVLTDIKLQ LRDTQETKSKEISDLQSALQDMQLEIEELSKGLEMTNDLAAENEQLKESVSSLQNKIDES ERKYEEISKISEERIKDEVPVIDQSAIIKLETENQKLKALVSSMEEKIDELDRKHDETSP NITEKLKEDVSFDYEIVSNLEAENERLKALVGSLEKKINESGNNSTDEQEEGKYILKEES LTEDASIDNERVKKLADENKDLNDLVSSLEKKIDETEKKYEEASRLCEERLKQALDAETG LIDLKTSMQRLEEKVSDMETAEQIRRQQALVNSASRRMSPQVSFTGAPPLENGHQEPLAP IPSRRFGTESFRRSRIERQPHEFVDVLLKCVSKNIGFSHGKPVAALTIYKCLMRWKIFEA EKTSIFDRIVPVFGSAIENQEDDNHLAYWLTNTSTLLFLLQRSLRQQSSTGSSPTKPPQP TSFFGRMTQGFRSTSSPNLSTDVVQQVDARYPALLFKQQLTAYVETMYGIIRENVKREVS SLLSSCIQSLKESSCDSSVVNSPSKSSEENLPAKSSEENSPKKSSEENSPKESSGDKSPQ KLSDDNSPSKEGQAVKSSEENSPASSWQSIIEFLNYILITWKKNYVPLFLVQKMFSQTFQ YINVQLFNSLLLEREYCTVNMGIKVKAGLDELESWCSQATEEFVGSSWDELKHTRQAVVL LVTEPKSTITYDDLTINLCSVLSTEQLYRICTLCKDKDDGDHNVSPEVISNLKLLLTNED ENSRSFLLDDDSSIPFDTDEISSCMQEKDFANVKSASELADNPNFLFLKE