

>gi|11467065|ref|NP_042541.1| H(+)-transporting ATPase, subunit 1 [Acanthamoeba castellanii]
MKKYQFLKSNLLQONINELFLQYLKNDNSNIGVIKSIVDGVVIEGLSNVKAGEMLQFSNDIQGMALNLN
SETVSAVLFGEDETKIKPGEYVEGTGNIISVPVGMSSLGRVVALGQPIDNKGDFPGSELKQVEVKAPGII
TRQSVNEPMITGVKAIDCLVPVGRGQRELVIQDRQTGKTSICLDAVLNQKYENSKNKNALYCIYTAIGQ
KRSSISKLVTLLEKTNSLEYSIIVAATASEAAPLQYLAPYTGCVIGEYFRDNGKHALIIYDDLKQAVAY
RQMSLLLRRPPGREAYPGDIFYLHSRLLERAAKLNKNFSGGSLTALPVVETQAGDVSAYIPTNVISITDG
QIFLETNLFYNGIRPAVNVGLSVSRVGSAAQILAIKKLAGSLKLELAQYREALSFAQFGSDLDET'TKNLL
SRGNMLTELLNQNRF'PIPIENQFVLMYSGIKGFLT'NVNKNVIRS'YENELFN'RISNYSVFN'TNVILL'SNN
EYKKNNNNNVVAFFISYFKFIT'TNIFG'FSAK

>gi|11467051|ref|NP_042527.1| cytochrome oxidase subunit 1 and subunit 2 [Acanthamoeba castellanii]
MINRLLNNLTSF'FTDNRWLFSTNHKDIGTLYLIFGGFSGIIGTIFSMIIRLELAAPGSQILSGNSQLYNV
IITAHAFVMIF'FFFVMPVMIGGFGNWFVPLMIGAPDMAFPRLN'NISFWLLP'PSLFL'LLCSSLVEFGAGTGW
TVYPPLSSIVAHSGGSDLAIFSLHLGAGISSLLGAINFIT'IFNM'RVPLSMHKLPLFVWSVLITAF'LLL
FSLPVLGAI'TMLLTD'RNFN'TSFFDPSGGGDPILYQHLFWFFGHPEVYILILPAFGIVSQIIGTFSN'KSI
FGYIGMVYAMLSIAVLGFIWAHMYTVGLDVDTRAYFTAATMMIAVPTGIKIFSWIATLWGGQIVRKTP
LLFVIGFLILFTLGGLTGIVLSNAGLDIMLHDTYYVVAHFHYVLSMGAVFAFFAGFYWFWKISGYTYNE
MYGNVHFWLMFIGVNLTF'FFPMHFVGLAGMPRRIPDYPDNY'YWNILSSFGSIISSVSVIVFFYLIYLAFN
NNNTPKLIKLVHSIFAPYINTLSKNLLTFASIKSTSDSSFFKFSKFFIFFMVSLSVLFI'FYDSSLCLNDH
TNSWKIGFQDPTTPIAYGIIKLDHILFFLAVILFVVG'YLLS'TYKKFYGSLNNDLPESKRISLFD'TLI
NTYKENLSFNVTNRTYNINHGTTIEI'IW'TILPAFILLFIAVPSFALLYAMDEIIDPVLTVKVI'GHQWYS
YEYSDYSVVYSNRMLDYDSIDRFAAMEMMYKGMGYLKDRSLLSYLYIPMVI'PETTIK'FDSYMIHEAELNL
GDLRLLKTDMP'LPFLPKNTHIRLLITSSDVLSWAVPSFGVKVDAVPGRLNQ'TSLYLKNTGT'FYGQCSELC
GVNHAFMPIEVYV'NPVYFYNYVYIYFKNFNLI

>gi|11467056|ref|NP_042532.1| cytochrome oxidase, subunit 3 [Acanthamoeba castellanii]
MKLNYDFFLNKFN'NVYNNDIRLVDLSNKWYHNCRVHFAGNQKHSFHI'VTRSPWPLYSSIAALMFT'FGLV
MHMHN'YFYGNLLSLAGFFLILLMMFVWWRDVI'RESTFSGYHTKKVQOGLR'LG'VILFIISEVM'FFF'SFFWA
FFHASLSPSVVLG'SVWPPLGINVLNPLKIPL'LLNTLILL'SGLT'VTW'HHVIRDKSWQK'FFF'SNSNNEEFK
APLLDNYVICAFALFLTVFLGLEFTVWQGYEYKASFYIYDGVYGSTFYMTTGLHGLHVIIGTLFLIVCF
FRLIDLHFIYNH'HFYGEEAAIWYWHFVDVWIFLFLSIYCWGSGVDSFFK

>gi|11467055|ref|NP_042531.1| NADH dehydrogenase, subunit 11 [Acanthamoeba castellanii]
MKNISFKVNDFOYTINNKLTLIQACLKNKVDISRFCFHEKLSIAGNCRMCLVEDLKQVKPLASCAINVSN
SMNIYTNTLKVKKARES'VLEFLLANHPLDCPICDQGGECDLQDQSVVFGSDRGRFYEFKRSVEDKDCGPL
IKTIMNRCIHCTRCVRF'SNEVAGVNI'LGVTGRGSKMEIGFYIENLMRSELSGNVIDLCPV'GALTSKPF'AF
TSRPWELKSYNSIDVLDL'HSNIRVDIRGTKIMRILPRVNSELNEDWITDKIRFSYDSFRRQRLYDPMVK
ISGSFLKIGWKKAMLFIKKFFCNFLGFNHSSFIPLRGIYIGDYLDLETIYTFKKFLLLNGSNFFLPSSSYN
DLTALYSFNTP'LTRLDEGDFCILLDVNLRVELPIVNSRIKQLVSKM'L'PVFV'LG'FYSNFNYFVKHISNSS
KTL'LLHVLE'GSHWLSAKISKKFSKPIFLIGDSSLLKGLIVPLFNFTN'VICDNWNGLNIISNDSSYLST
KEFNLSSSHSQNSHLLNFPIN'FVLNYDKAVLVDSSAFQIYQGHGDTNAINSNLIFPSTSFIEKNSFYSN
SLAIVQKTKKILFSPGNSRDDWKILNALIDNFGFSYFKVRNSFDLVSFLSESTPFILYKRSFSFKCFGFY
EQLVYHFFNYFSVNNNYIYDSITRNSKIMSLCFNKFKMKGYNFF

>gi|11467060|ref|NP_042536.1| H(+)-transporting ATPase, subunit 9 [Acanthamoeba castellanii]
MKNLEIILQSSKMI'GSLATSGLIGAGAGVIVFGCLILAFSRNPNLQKELFSYALIGFALTEAIGLLAL
VMAFLILFI

>gi|11467085|ref|NP_042561.1| NADH dehydrogenase, subunit 7 [Acanthamoeba castellanii]
MRKNQISPYIKTSKIKNFTM'NFGPQHPAAHGVLRLILELDGELV'RKADPHIGLLHRGTEKLI'EKTYIQ'A
LPYFDRLDYVSMMSQEHAYS'LAIEKLLNCNVP'IRAQYIRVIYSELTRILNHILAVT'THAMDV'GALTPFLW
LFEEREKLM'EFYERVSGARMHAAYIRPGGVAQDFPLGLW'NDIMQFVEQFFWRLVEVEELLNGNRIWKQRL
VDVGIVTAAEALSHGFS'GVMLRGS'GIAWDLRKNNPYEVY'NKLNFNIPIGKNGDCYDRYLIRVYEMYESLN
IIKQCLTAMPAGLIKVNDKKITPPERTDMKYSMESLIH'HF'KLYSEGFNVPENETYACVEAPKGEFGVYVY
SDGSNKPYRCKIKAPGFLHLQSLNSMSKGHMIADVVTIIGTQD'IVFGEIDR

>gi|11467084|ref|NP_042560.1| NADH dehydrogenase, subunit 9 [Acanthamoeba castellanii]
MGLNFFMSRKIYYIKLLTGLYKFKIKALIVKKNESNAYLLVETANFYNLVFSLQRSSLTQFKVLNDVCI
VDYPEKIDRFELSYNLS'IKYNFRIKTYTSAYVPSIS'TLFNSANWIERECWDMFGVFF'TNHPDLR'RIIL

TDYGFEGFPLRKDFPLTGYIEIRYDDEKANIVYEPLLELSQEQYRLFNFTSPWEKIK

>gi|11467081|ref|NP_042557.1| ORFB [Acanthamoeba castellanii]
MPQLDKLSFATQYFWLTLFFFGLYFLSVNFFVILVFKNLKLRNIIYKIWFYFFLYRFDYVDYNNKHKSLVN
TSFSFIYYTLYINFFILTKINFIFEKTKSIINKTQTLNQSQRLLMISLLNLFNSNSVDFVKKFQELNID
EI

>gi|11467067|ref|NP_042543.1| ribosomal protein L11 [Acanthamoeba castellanii]
MRINLNFHYDKLHLKEIIILIPKYHTNMVSFLTPIILGLYGINVKEFINDFEIKTRFINFDVIVPTLVKIS
KIKTFEIIILKTPYVISILSNLNNFSVTKPNIDLLSVYKISLLKSVFHSNFLDVFHRRRIYLSLRKYLSLVI
KVNPHLSVSSALAKKSLSNLNNLLLLKFNINILFAKLLNRYGLFVSFNNSASNLNYLKTVLAIQNI
SIFKAKSNLLSSLTGNYFFGNIYFIGATSLKYFIGFLKEVSLKSFSGSNFFPIFFKIRSNLVSQPFVKLF
LSVFNSQVKLINFYALRVIYITIFIKIFKNLNFLLNKKLTFLLRNNSNSNANISSNIKES

>gi|11467082|ref|NP_042558.1| ORF25 [Acanthamoeba castellanii]
MKYSILLFFTLFAINLLHYISEKVIIVIFIVFLFFLMGFLSNIINSEFKSKIDYILNDINAYVNVVFNF
LYINKLFYLNKSLKTGFLSLNSILGKKIDSLKFYTTLSNKLNAISSTTVLLLK

>gi|11467061|ref|NP_042537.1| cytochrome b [Acanthamoeba castellanii]
MRFIKKYPLLNIVNSFLIDYPAPPNISYLWNFGALAAFCLGIQIVTGIFLAMFYVPSIESAFSSVQYIMR
DVNYGWLIRYIHANGASFFFICVYIHVFRGLYNSYITPRELLWNLGVTILIVMILTAFLGYVLPWGQMS
FWAATVITSLFSAIPVVGGEYIVIWLGWGSVDNATLNRFFSLHYLLPFVIALLSLIHVAVLHESGSSNPL
NIALSVANKVPFHPYFIFKDLLGIFFLIVFCYAVFFKPDSSIIDPINNVPANPLVTPTHIVPEWYFLPFY
AILRSIPNKLGGVITLGLALIVLFLLPFITNNVFKGSFFEISKTILFWSFFSVCVLLGWIGFKPIEDPYL
MLGQMLTVLYFFYFFSLAVIVPTLQAYTFKNVFAK

>gi|11467074|ref|NP_042550.1| ribosomal protein L14 [Acanthamoeba castellanii]
MINVQTVLKVADNSGAVFVSCIRLLNSSSRVAGVGDITIVVVKKSIIKKNIKKSKEVKKGQVCSAVILR
TIKGVKRWGNFFLRSSSNSVALINKYCLPIGSRLGVPVFREIRVNLKFSKIISIAQVTL

>gi|11467070|ref|NP_042546.1| ribosomal protein L2 [Acanthamoeba castellanii]
MSTLLWKDRPIKNLTFGLKRISGRNNQGRITRYHRGGGVKRMGRLIDYKRYIWNIFGFVHRVEYDPKRNS
LIALIVYSNGVMSYILAPEGLLVGDCIFAKENIVLKPENSTYLQHIPIGLKINSIELSENKGAQFIRAAG
SYATIISKFEKIVILKLSGELRRVHNSCMATIGSISNFQYIYRNFRKAGFYRLKGWLPVVRGVAMNPVD
HPHGGGQKTSGGRPSVTPYGVITKGPTRKNKSAFIVRRRS

>gi|11467075|ref|NP_042551.1| ribosomal protein L5 [Acanthamoeba castellanii]
MRFYNRYNSSLKNYLLCSINSFNTNTLKIPLKPTLSAVFNTFRGERSLKFIKLYLMILYISNQKPFIKKV
KFSYIKKKILKRFFISVSLNKKNSFNFFMYMLNFYNYFFHIIYYQKCLKYNRFENSLILYIDNIQFFFFKNY
NKQKQKTQIKCQLNLRNSQASILFKYLNMMFLIKVKN

>gi|11467059|ref|NP_042535.1| ribosomal protein S2 [Acanthamoeba castellanii]
MFNRIHITVNQLVASDLFLGYHIANWNPRTNFFLIGKYKNTNIFNLNYTYFLAKKFIVFLSELVFNKGHL
WLVNENFSLFNRSSSELYQLYSLFPEITFLNSKWCKGMLSNYKYVSIVKPAKFPHSIFVPNIQNNHYVINE
SFIINIPISIAIVDSIDNPSNVFFPIPGNSKSLKSLFFFYMVIKSLFYRYITSSKFIKNSINRLNGLNS
KLYRNLFVRDYFAFFKKRFLLENIIFLFSKGFSSKKNFLFRPKMHITSKTLFLFKWKMPLLILSSVFKN
VLHWDIFNKIVLKKRLVVKNLQFFKTLMFVLI

>gi|11467077|ref|NP_042553.1| ribosomal protein S8 [Acanthamoeba castellanii]
MSLLSNMISIVKVGYNARHLQVIVQNSKLCINVLSVLKLYGIRGFIKDKQKNITILLKYINNKPAVRNI
AVISTPGRRTYLKHKKLEKFLTKKDSGFLILSTSGKILTDEESNMFKIGGEALLKIN

>gi|11467069|ref|NP_042545.1| ribosomal protein S7 [Acanthamoeba castellanii]
MGIRLKNKFRFYFKSFYFKRILKSKIKRYNSFLKLYNSAKSLSQHSFRRRNKKGKFRVKKLRLGKFKRA
LFVKRLYKLGKRYFFCYLRQRIESIRLKKFLVKYRWRNKQRLWKRIYRRGFKRLYFRFFKKSINF
RHFRTANSFYKSHGLYFFLKNFVKYSRLKLVARYGKIFKNKKKVKICKLSKDRVEKLILLNIFQGLTS
RGKKKLSISIFKTLFLLKFKYKRKFIDCYLQFLEKVRPLIYYKVMFIGGKYYKIPTLMPISKSYSTSIR
WLNINADKRDIATSLFSQINISLKNESLIKYRKEYHSASFENKSYIRFLRFLKTGF

>gi|11467080|ref|NP_042556.1| ribosomal protein S11 [Acanthamoeba castellanii]

MKILKPITFRKPRIISQKVLRSKLSKVKKSPWYKAKKNYVSFRQRLVLAKKNPNKKRYLFFSKKRNNV
FLTITDVIGRVVVSQSAGSCKITTKKKRSPDTLTKTVSASVAKIARAKNIKYLKFFMNTNQTKIGKTIF
ESFKKTGLFILQGVVVKNSHGLLMRKKKAKRL

>gi|11467073|ref|NP_042549.1| ribosomal protein L16 [Acanthamoeba castellanii]
MRFKKYFKIKYKNNNVYEHDLIHFGDFGLKSLGNCNLTSEQLTASLKAIKRVIKKNFLIICALPFWMLT
RKPRDVRMGRGKSPAVKVYPLKAGKIIIEFKVNETLLLRALKSSSLRLPVPTKVVKYDKRTDCIKSS
W

>gi|11467052|ref|NP_042528.1| ribosomal protein S4 [Acanthamoeba castellanii]
MYKFYKHKLYKKYQDELWGHIIISKKSFSYNKKSILLNYRDIILNRRLRIKTKFKYFRRGFLKLNLYTLLL
FKFFRKNIRVFSFKRRQSLSVPLSLSSKRFKTKRKFVFFKTSKIASLLKFNIFYANTVAFNKVFIKHNYCL
SSCSNIYTQTKLLYFPIISVNRGLVIFYKSKNFLRVNQLQVIKKNLNRKQKIFFYSVHIAAPKKKTKK
SLFALKNIYYKKVSLFFGFRKVVDFKVVYNLAGALAKGNSFAVFLMLEGRLENFLMRLNLFPSIYFIKFF
IEYGNVFNKIIINYTSYHLNFNEIVSFNKKYKLYFFIKSKLRQKVIINAPSFVEVDYKLLVAMLIR
NPDELALTKPLSFNLYTKFLSVNR

>gi|11467066|ref|NP_042542.1| NADH dehydrogenase, subunit 1 [Acanthamoeba castellanii]
MVSLTVYFILLSLYLILNVILTVAFLLTFERKVLASIQKRKGNWTGFLGILQPLADALKLILKENPVPO
NASSVLFVGGPLILLILSLSAWFVPIFNNETVVSINIGILYVFMVSSLNTLNIIVAGWSSNSRYAFLGA
LRSIAQVIAYEVVIGIIINIIVLSGSLNFKIVWAQKDLWYAFVLWAQFFLFFIAMLAEETNRHPFDLAE
AESELVSGYNVEHSSVLFALFFLSEYANIILLCHVATILFLGGWTPDLYFFIKFFSVEYYVSIDEFFYT
LRSNFYIITWIYHSLVYIIKVYIYLFAFIWRATLPRYRYDQMLRLGWKVFVPLTIGLVFISISLTLFFD
GFPSEGGYINHHFFSSDIFI

>gi|11467071|ref|NP_042547.1| ribosomal protein S19 [Acanthamoeba castellanii]
MRSVWKGCFYKNNNGLSKSSTVINTMLKKKFTLHDGKSYKSIIDRSMVGLKIGEFVTRKMGVVLHKKK
VLKKKGGK

>gi|11467076|ref|NP_042552.1| ribosomal protein S14 [Acanthamoeba castellanii]
MKYLLIKNKKLYKLFKFKELKRLQYKSVMLNTRLPNYIRQKAFMYINKLDKNTSYVAIKQRCFLSNNGRS
VLNHFKLSRIKLRLLISNNYVNGVKKFNK

>gi|11467079|ref|NP_042555.1| ribosomal protein S13 [Acanthamoeba castellanii]
MKKLQNFNTFVSDNKNKNIIFSALKDIHGVNLKINKMGLVMGLDKFEKVSSMNFELFSLIKKQAIFFYNL
EENKIFNNVNNKKKIKNYTGMRHILKLPVRGQRTHTNAKTPSKNIKKEL

>gi|11467083|ref|NP_042559.1| NADH dehydrogenase, subunit 3 [Acanthamoeba castellanii]
MTLEYIYIFIFFWGAFIFISCLLIFLSYFLVYQESDIEKNSAYECGFQPFEDTRSKFNVRYYLIAILFMIF
DLEIMYLFPPWSISISTGSFFGVWAIFLFLIILTVGFIYEWQKGALEWD

>gi|11467054|ref|NP_042530.1| NADH dehydrogenase, subunit 5 [Acanthamoeba castellanii]
MYLLPLLFLNLFISCIILGKFLGKRVLFVLVINMLFSAIFSFWIFYEVGINKSVCIYIDLGPWFHIGLLK
LNWLFLFDSITSVMLVLVVFSLLVHLYSIDYMSGDPHIIRFLGYLSLFTFFMLMLVTSGNFVQLFLGWE
GVGLSSYLLINFWYTRIQAANKSAMKAIIVNRFGDFGIYFSLLVIFVFFKSFDFGVVFNLVQFLDTQPRMS
FLGFSLNRVDLIVIFLFLGAIGKSAQLGLHTWLPDAMEGPTPVSAIHAATMVTAGVFLIRSSPILEYS
STGLFLVSLIGGLTALFAGTVGLVQYDIKKVIAYSTCSQLGYMFFACGMSNYSVGLFHLFNHGFFKALLF
LGAGSVIHALLEQDMRKMGLIKMLPTVYVAILVGSLSLTGFPFLTGFYSKEVVLEIAFSKFSINSFFI
YWLGVFAAFITSFYSIRLMYLVFFARPNSHARAVNSSHESSSIFIVLAFLGFLSIFIGFIFKDLFIGLG
TDFWANSIFNLVNSDILYAEFLDYKLIPLVFSIVGLFFSLFVYFVIYDYTVFVVKNFVFRYAYFFLA
KKWYFDLLYNNIFVFNLLSSFYLLTFKIIDRGLIELFGPLSFVRLINKSSIIFFSSFTGFLYNYIFVLL
GLMFFIKLTSSLFFPSFNSFFNFGLFICLLSLIIFLSFGNKKQNI

>gi|11467057|ref|NP_042533.1| NADH dehydrogenase, subunit 4 [Acanthamoeba castellanii]
MAFLLYYTLFISFMLWLAALLIISFSVYGSPEKVLIKKTSLFFSFFQFILIIFFWILSDNISVLAEFDI
YNFQFYKQWFLYNYFHYVIGMDNISLLFLLLTFFLTPICILISWNSIKYRYNSFIICLIFITFILFNIFC
VLDLVFFYIFFESILIPMIFILIGVWGRQRKIHAVYQLFFYTLLGSLMLLGLILVIYSHIQTTDIRVLYN
TNFSFYRQLILWASFFFAFCVKVPLFPFHIWLPEAHVEAPTGVSVILAGVLLKLGTYGLLRVFIPIFCDA
TYFFLPLVYTLCLLGIITYTCCSTIRQVDLKKVIAAYASVSHMSFVILGLFTSNIQIGGSVFLMLSHGIVS
SGLFFCIGCVYDRYKTRILRYSSGLVSTMPIFSLCLFILILSNISFPPTSSFIGEFLILLGLFENNHF

LIATFSIILTAVYSIWLYNRIIFNRLVVNYLRFSDFSKKEFVVGFIFCFITILFGLKGSYIISLIEAPL
YVYLSFK

>gi|11467072|ref|NP_042548.1| ribosomal protein S3 [Acanthamoeba castellanii]
MGHIINPISYRLYNIRYWNWNWFSGLNYSYLINQDILIDRFFRKFLTTHLDSTNAGIIFVNLKIIRSFN
NISLYVYIHDSFLDLLFFNLKKNARFLLIKRLFNKKFYKKYRKALRQNKQLKQGLFMLLKKRVILRYSRK
LFFLFIKNKILKIYWESFKTSLFYLRFSRSSFLSKIFIIIGLSKMNVNANIISEFFFFIRLTQYYTIWEV
LRNINFLFKSLMKRKLVKGYKITCSGRFSRKQRTTYSWKAFGSLAFSTVKSCLDYSYKTIALKYSSCTI
KVWVRLGKKKSNLVDFV

>gi|11467053|ref|NP_042529.1| NADH dehydrogenase, subunit 6 [Acanthamoeba castellanii]
MLTNYLLIIFCFLALFCSFMIIASKNPIHSILYLILVFCNVTFVLIILGVEFIAIIFLIVYVGAIAVLFL
FVVMMLNIKILELDEVFWRYPAGLLISSCFLFQLFTFVFNFSVVEVFGLFFYNGFYSSINKLALNFSEIH
TVPSGLLINGIYIFPNLSNLGIDQVFINSIYKEESFFCFVKLNEASTNLLGLSFELTNTTEILGWLVTY
FFIFLVVSLILLISMIGSIIILVNLQNNINIKRQVIFRQSLRDLKSSVSLKN

>gi|11467086|ref|NP_042562.1| H(+)-transporting ATPase, subunit 6 [Acanthamoeba castellanii]
MIFNPLEQFRISVLQKLFFGNIDISITNNTIILFVILIGFTFLFYVNYSTNTYIPSKWQYAVENIYLFVL
QLFKQOINNIVALKYFPLVLFVFSFILFANLIGLLPYGFTITGHIIFTFQIAFSLFFGITLINFFNKNTE
FFNLFVPSGVPKPLIPFLVVEVVSYLIRPFSLSVRLFANMLAGHTLLNLSAFIFNVFKKYALISFLPL
LFIVFIIVLEFCIAIVQAYIFSILTCIYLNNDIYNTSH

>ORF92 (putative mrps16)
MLINLKDRMYTIRLKKKSNTKTNNNSYDILLKKDKHNLPIGSYNQSKMIITLDLESYIFAITKGCLVSEK
FRKIFIKTTSNITNKKNKIIF

>ORF99/mrpl19
MAINQINKKRKNNLNNNVIKTMVLYIKYLLKEDIEIKISSFIGLCVIAKSKSNTIVLKNNIKKEDIKLV
INIHSPLIINIKIVKRYKKKFRLSKLYYK