

Three ORFs amino acid sequence of RTOV1

>L protein

MAKSDPPDWREDLTNAFVKQRPRYYRRGRAPKRYVTDSRAFMVDEKFDTMLDLYPYAT
WQQELAEIMTWDAEFINEWSSVISRDCMHQLGVTQDICSATLTPCIIAKMVNLALKR
NIYRSTTSKVSDKTLREKACLASLEAVLHQYDHMSSAVTPRIMANFHTKPREKIVEKFKCL
PAEVEILGSVVEDCMRVMSEIKMLHKYVRIKDGRARARFRLHRRLENPWMRLDSLGVRL
LLTRDVSILEVEGRTYLVNHDLLMMINKLVELWSLMLYCHFQDGTNQDEGIYTLQKDFIV
HITDLVLRSGKFGDSTATLTQANKGLYCKSLEGLFVAECIYRHDFIKGWDNQTLGKTLWK
ALKEEGLPIASEWRKSVLVKMFKEYTMPQIAEVIGTVKIAGHPSIEVEKGLDKLYERTHEL
LEIDSDAVQKTIGVLTRELFMNFHRVHGHYPLCELRADLHGAIIRRTIIERLGPTHVALAAF
KNTDALEWSKVLLKNAEFDVPDNQLQILKDKALGVTRSKILQVIFGTMPTHEETLTMKT
ENRRALIHFLNDHYSSEFHKYLSEIKKSEGVSEMVKDYLVIKLTAKELKAEGRMFGAS
PAVERNRRIVNDKNVMDMMSLYDPRQLITPDELSIIKKLFSFRHYASMYHKHTLFQISFDFS
KWNNRMRKESIDVPAQEFYDRFYGESYIGRTMHMFNNTLYYYARISKNITKRNLTLNDV
SEDLFQLALASLEKTTKKVQDSELRKTLLHKQGQELLA AVQANPSIQNWVTLLERCNIWIG
KYHTWVNQLGGIEGLAQPVWTSIFGAFLVSALEPHFPLFDISYKGDDVRAVIAPDEAVKN
KGHDGVRQQIMDVMRGLCDQMGWELNPNESFVSLSVICTSKQYQVNDTWLPASNKKM
MKMMSMSNLVFPTLPDLIGSIYSTAHSACAQTVALPAYCAATYCAAREMLREFGEMSVD
ADGLTALLWPQILGGPGPLPLQTFMIRGENDMLSIVAALYTHVFQGTSPGLSHRLRSILQV
PMKKTPDKAMLLADPYSVPISAPEQPQAVLKRMMKTSMAKWVRNKDIRSLLSAQGLAD
KTKYVAHLLSMKPAAKVATMLWECSFPYVVEEVLAKFQTSSTIFQFLTTPYTANEDRAR
ARRAAYRALDKMLDAAQRCLVFWISKIVSNRFIKAQSMLGIPMTHWLSTTTCPTQLTMMI
REKAWNREIIGLTYP SLVVQNMVGSIDELRMLHPNWRLDNIVNNIYVQLHNASSQTDTDS
YHYRAVKGNVPWL GAYTRNDLADVDYRFRIRSTTSLKLLKLFELWKCGESLGPSFQQSV
KVHIQALTSYPLKEALALVPEVGGGHLAHRGVIASTSRVTMNNARPNI MQGVRYESEGLSI
LKGDQTDYSLNYAARQYISILLATWPLQFSLALPEDYPQLLHAYLHWDLAHPDTYRCPY
CLNDIGDVMITFMLRCPTETKYRKLTLVGTSKIELNELKRCVNEVVAGRIRRTATQMYLDP
ANPYVQEACAFVVRKFRLQGQTIQDVHIMNRAQRIPGPQLSELFAATSGYRPAAGLSINL
LRALPVTLLYKSVVMEVLEALLQSLPDLDFDSTIVFDIAPHWNPLYQFFQTLIHAALLQN
LNLGSTITITQEDWRLSPLQWRAGDNTNAQNAALTFCRHVYPIFRRWIKGEELLPRLIISVI
QPDPTVTQILHNKVSSLAHALARKLIRRSNTSAKQGILNYFRLETHNEIEAYKVRVDQAE
YVQEIRDLCDQILDDILIGGGIGLMAETLSTNLLHLACNVTLDDWVDAGNLTHIDDLPALQ
TSDPVDIMSLKIGEPFPPSDTALVSGTLIEDIGRRCDKWVLRFALWFSYHLSQTSLVMWEGS
MSDIVQSMLETHKAWLSPFSTIRLCLVTAEDARRVFKHRFDELA AELLAYYDEQTEWQRL
PEHDWARLPNRNVCQLTAVQHTWTQNMHMPHPVLIGSVPSLDWDVLSPILVYLPEGDPL
RGIRLDPREFTRCIGHLNTSASKLTLLLDLTGYVPPEDIIGHYGIMCLADGLAGQTRYCLTH
YTQAIVVYNSLLLNPITGQPVQDASITELPLEIISGGLPREAIGRLKYKGLYPGDLSLPEVIQ
VLCAYS AELHEVSLITFDADRNWSSEP KDYARIIFNIMWLCRRVLTDPGLVIVKLLPTADQS
TMQVLVYWLILFEHAHIIRCPVTRSHSWEIYLIGRGVRPVPEQDIIDLREGTRVLPANPNLE
GLVCEALQPIFDGVRSYIIDGFSNAPHPFGAYRRMLRQQAQPLALQQLVSGFHIEYPQRLT

HLCGWLDELRSRCIVAQESLQSLFRTMNAPNQRPLRLLGRRRQPLASGERLLTSYFTKLCT
MAFVREAVSSYNVGQTYPSLDSLENHLKNAQAHLLESCMEELIDQLLTNPNTINVSNMHYT
IQGGCLLLDDQRKENITTLLRYQAQRWMRIIGTWSYISYVHSENPQLFESLHRHWIESPV
LRCHEAMIETHTNDRHYPVPFSPDIRLTPEEAILPEGVPYFR

>N protein

MSRLTLAQLRGACRARQGIPLVAGLSTMTMQRMAVAKPLCPQAFGDISQEVDPVRYTWY
SRIACTGLYVRHMGQINDWNDEQLTSNLIAELGVTWVYDAPDTPAPINEARQKLIRVIRQ
SITQEDIDTVLHYYVENLYKPEYLGLETEPITVGTMTQQASLQFTAFHKHMLNAVPIHLFQN
PAHHVFRDAILLSGGVEDVALDDPGMGAAAGAGNANAVNQNPANDTTVADDWANQV
QDWDFQTILNFCHILGIADLNQTMSTAFGAAATLIAVLCKGESVTQNWVVRRAAAVGVIIH
GAMDNDKFNFAVVSIAKAYKRDNIPLDDLKYLITTYFSTTGLDTRPYAWMVEQAALS
HITPAIAFAHSIQSMHWANLSYLHTLIPRTQFVNFHILTLMLYCNPYGGILNPPIPSAHYADV
AYIGLALEKKLDARTTYNQYRGQPRDTIKTRRELDIVQTMVDQSQSIMDDERTLAKIFT
QLLNVRGTEDGDYCYIPVDNNAALQNVAYEGYVGPVPQLGDQDGNQAAMVAGAIIDNE
REEEIRMATRADWPAKKRLLPRNFARLNRSMAQAILNNEPQLMKDVRTCCEVLYSISKQ
TSVFNEYTMNAANTQLRVTVTKQLNQELIDIQRRNEIPNAGLCLAPAEHKIITVNIAPAND
DITADSIFNHGDILVTYAIWNNQDVAVHPGYQASVNLPGFRPAHHQPPQAPPAGVPPNNA
ANAANAALNAAVGGGAGQQLQAAGQVGGNNNGPQNNEGIILEQMDGLGEDLFPVNPQ
NAAGGGGEEEEQEEEEQPENEQDDGQQ

>G protein

MILENQSVKLLALFRHIAPRCSKEHIQMMLGAWVTTSVVFMLWVLLSHSPWACAQDPPK
HQLVDDGMNTMIKNETLMFGELGLVLTKIPSVYAVYGSWNYHISLPIPCITGVELGDFNHN
FKNYDNSLTSLFEQLNRTEIIPGLKNSIRHLEATQRIAQTSFRNILDLSLMNIKQDMETGW
GGIFEPLCDEDIHPLPNQRVTAKGLLATSPAPDHNTNGTSTTPWSSIPVTTERPTTPVHPAS
ATTSRAKNAAHTGTQTKSGRLVAENMRVDPAMELRTGALLRGKLMSHTAKSKSYKTPAT
PVLPAVPDPNEVLIDGVSSPSNPSLKPESPDVVETFNADHTSMSWSPATPPIRWTTPLPISST
AAPPASTTSPSFSTTLRASTVKPPETTTSGATGVHGSATTLNNGQSTTVSAEIDSFTGATNPP
NSNDTMSMIQELVEAMGRSKRSIYQIRSVSEPIQQDGTTVSNPPYQQRMHNTHTVHNHNY
EGLFKGSGSFVQVMGGVVNLAPNSGEDPGKVTLTGTPAAEPPPSAERSSPVEALNKEEYN
RLTNQYAAAYCSRVPLEDVENCVAPMRRTTYCTDQCKQDFVVHARSHLPEVETMKLADR
YTAWDDATLNLTYTVLRSVAGPHLTNDVLEDIVEVSNKMHRGRRSNFFAHLWGACSTEER
DAMAAKIESLSTQVGAVHDFTTESIRNMDSLVSAKLAAVDDVVLMSRNFNDIATQHNNR
LDELRSALLNHTIIVTLIHQLTTMNLYLMSQLKSNEHVQNMEIKMRSLQNTLKTGTISSTL
VTADEIRRATLTISQNLDPGYMLAPVTTLADYYKAPMAKMMLYKSKIYLLQLQFDILPSYQ
SYATYQVTALPVAVGSRWFHLRDLPEVFSIHKEAKEPFAWSIMSQAIIYKKGMDHPLHTLK
DGMTTGRDWGANCLAKLLSHNPSYNISCVLAEANPNVAAVTERTYIAQVGLNMWAISTN
TTHKVLLHCLDTMSTPKQVIIHVTTMKIPGQCSINGPAFRLIPYNAALGSTTFTREVYFPY
QLVWGNVSVVPWPVPPSLRPSKWVSQVPSVEDLDSLIGNHTLHINNLMIDYKAKQAKTSA

KFNATVEGAKLREMLASMSMNFASWASWVLSAVLILAVIGLIICYCVCVRSNPAVRGASLLG
SIPLQRVAAEVANGTSIVVVNATTTTTIAPPLSNASLIQQIGKVL DHTMSTIQSSFWTPYLFH
TLLWLTGIGLMSFYFYCHVKCLQRVKRRLLVATNWT PRTMNVIIHHEGEVKLR LWFII SVK
HLWRKDNITTEAAIQASTLVGNWSDWTCEFNSSQPSFIKAQTFKRWQQVFRIK VSWGSLC
LKSSRYPVLDTCAELPDYLEVKASEILAQCHDVMPWTWGSVEFLNICRVEVIPSQAINLFT
NYGS