

FAP57

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TtFAP57C  -----MIDKNDITGRLKLDLLHGFGLSLSKGYRNCISILDQENFRKVVVFLGOYLAVKQIDFQDMNFIKLDEKTES
Hs        -----MSAVVAQTLHVFGLRSHVANNIFYFDE-----QIIIFPSGNHCVKYNVDQKWQKFI PGSEKSSQG
Xt        -----MSVIVAQSHYIFGLRSPVTNNIFYFDE-----QTIIFPSGNNCVKYNVDQKWQKFI PGSEKSSQG
Dr        -----MATVAAPSHVFGFRAGVKNLLYLDE-----QTIIFPCGNNCVRYNIDQKFORFIPGTERSQG
Che       -----MSMAAIAPRLVFGFRGDVGDNVAYSDD-----GSVVYPAGHNVVLYSADTKTORIIPGTLESEGG
Tc        -----MPSPPAPPRMIDRRHVFVCEKVKDGFQYLDD-----TNVVVWVSGKSLVILD TQLGTQOLI SCTPTCOS
TtFAP57D  -----MAGLAQHIQLKYIFGMNNEIRNSLQFHDE-----DRIIYPAGYNVVLHDLNDKSOHYHQGTNEYRG
TtFAP57B  -----MOLPSIGNTOHIQLKFAFGINTNIKNNLYFLDE-----EKI IYPAGYNIVQYNIQDKTQVYYQGLTDYRG
TtFAP57A  MAOOIVOSLQDEGTQSLKLDLDFSMKYVLGYRSDFKNNIFQYTM-----NDQNR I IYPAGNTIVISNNE-NKQOFINCIPGKTG
Dm        MDEANKEDVKRASLSNSTVTIRPRLIYGLRSDVIGNIHFNLIT-----KEVIY PVEGVLAFHDYVQNKQRFRLLPEDTR-
  
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82

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TtFAP57C  IVSMAICTKKMVAAVCEKQYOODASEOQOODOHYQSKYSSQPR-----PFLAIYSLSDKKNQMVENRS
Hs        MLALSISPNNRYLAISETVQEKPAITIIYELSSI-----PCRRRK
Xt        MOALAI SPNNRYLAMSEKGLEKATVTIYDLASV-----PFKRRK
Dr        MHALAI STNNRYLAVSECR-EKATITVFDLEQE-----QNRRRK
Che       ITAICVSSNKKLLAVAERA EKAMITVYDLOTL-----KRRK
Tc        VTALAI SYNHRLLAVAESS-KFPCTIYIYVCDPS-----GNPKLRRKK
TtFAP57D  ISCLALSPLKRYLALGVKGQDPAT-----LIFDTFTQKRRK
TtFAP57B  ISCIELSP LRRWLA VGLKGA KFDNEKFDNPSIATYD-----TITQRKKH
TtFAP57A  ITCMTLSPSKRLLAWS EDCDSGIIVVFDL IKLDKLEKAKNQNYQEPSDKDKLDKQAEKDRRDRFEKEKREKIDKLOKEVKR
Dm        PEVISISSHRKLLAVVERHSKNGRYIS-----IYELATLKKRR
  
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163

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TtFAP57C  FIYDKDTQMSSFVALSFSS-----DGRYLACLTG-----HPEYKLI FLDLN
Hs        VLNNDFQVQKFI SMAFSP-----DSKYLLAOTS-----PPESNLVYWLWE
Xt        VLSAPDLTAHEFVSI AFSP-----DSKYLV AQSG-----FPEWQIIFWMWE
Dr        VLTGGEMVDFVCM AFSP-----DSKYLIGQAG-----GPDWTLFLWMWE
Che       VLIAADAGSKEYVSMCFSS-----DGKMLLAQGG-----GPEYNLVLVWWE
Tc        VLOVPLD LGSTEYISLGFSL-----DGRHLISLGG-----YPEWNLVYWNVE
TtFAP57D  NLGLNLGNLDRYNIKQWVSI AFPSQNOETKYIFSLSG-----AGGDVVL CWVWHE
TtFAP57B  IILNFKEVKIKYWVSLAFPSOQ-----EAKHLVSLSGNCLSERHKDKESKDRDSKEKQSSAQQGS DKEIEGEI IACYWNLSG
TtFAP57A  IITTLDCRSRHYVALDFNKI-----NEKRIVALSC-----APDWOLIYFOLD
Dm        HLELPSNHRNAEIQQMIFTN-----DSRSVALITR-----PPEETLIMLVLD
  
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244

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TtFAP57C  SNKREIEIASAFLEERL RDVPOKENELKINKISVSPKDSHOVALLGPEIFMIVRI-QESSFVPITQEI KRMPKKKDN-----
Hs        KQKVM AIVR-----IDTC-NNPVYQVSFSPQDNTQVCVTGNGMFKLLRF-AEGTLKQTS--FQGE P-----
Xt        KQKVMATVK-----PDSH-SNPIYQVSFSPQDNTQICTTGHG VFKLFRY-LEGNMKQTN--FOKVE P-----
Dr        KKKVMATVN-----ISN-NGPINQVSFNPDNSKICVSGKGVFKIFHY-AGETLQTN--AFK TDS-----
Che       KSKVA AVAK-----TTNQQGSP IYTCAFSPGDGTMVSIIGQGFKMFKL-VDGSLKLLNIALGKRDP-----
Tc        KARIMATCAVL DENE-----LGSRRRLLNOC SICPNDFSLVCVSGHGIVRFLL- RDNLRRASG-GLREPV-----
TtFAP57D  KGKCLGS-----IDLGAQNDIYEISFNHSDANSICVTGNFFGIYAK-IEGTVREDNQQQKPSVONGENSS
TtFAP57B  SGKILAWV-----QVSLANIDAFEISINKNDTSFFSCIGRKVFKCFKK-IDSVEEGDROADDKQKGEKQKGEKY
TtFAP57A  KOKTVIINOVP-----LKVGDNMRYTHCFHHPKEEDFIVAIGTGAIKPYKL GADGQFKOKDPPFVKKESKDQAH S--
Dm        KTSTVIEGRA-----TIPGSHGGAECIAGNPDCNFMVGGERTLLLSK-SERGF S I SNNLKVYRVTS-----
  
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325

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TtFAP57C  -----CIYTD AVWFDN-----DKIALSTSYGEIFIIQDSEVK
Hs        -----QNYLAHTWVAD-----DKIVVGTDTGKFLFESGDQR
Xt        -----ONFLCHTWLSE-----DRVICGTDNGLSLWESGDLR
Dr        -----HNFLCHTWMIT-----EQVLAGTETGQLMMFESGRLR
Che       -----ASVVSQYWVSPDPS ENKERLLLGTIDGEIIMMEGTDAR
Tc        -----TNYMAHIWIPSE-----NRLILSTENGLILMENNEYK
TtFAP57D  AAQLPQPTLNIOVSAGNNNONPOPEIKLENGNLISNLPADIVEKNFVAHLWMOCE-----SYLVFVESGEI ILCDSRGNF
TtFAP57B  KATLKNHCTQLNGAPOELS-----ODYTCHTWL TCD-----NNLIVCTANGEI IVCNENAEF
TtFAP57A  -----PNYLSYCILODG-----YMVIGTDMGEILLFQPSCEF
Dm        -----MAFLSLDLLMIG-----TSDDQLILVENGEQKLAQKASDA
  
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406

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TtFAP57C  OHIORVLEDRDER-----IPIDCITPFSKGLIVGCEAGNFAVWMKA
Hs        WETSIMVKEPTNGSKSLDVIQEESESLIEFPVSSPLPSYEQMVAASSHSQMSMPOVFAIAA YSKGFAC SAGPGRVLLFEKM
Xt        WEINIGSKSGOTDHEKHSAYSQELQVTSAEHAAPAP-----VRINAILAYSKGFLCSAGPGKVCMEFKV
Dr        WEINVTSVOKTES ESKQOYSDEPFSAL-----POVTAIVSY SNGFACSMGOGTVCLFEKT
Che       SVFNTDNG-----LAAASIVCYSKGFVVGQDNGVVTIFEK-
Tc        YPLPMPSPSDG-----VSINTLIAYSKGFCIGDGLGIYIFERT
TtFAP57D  LQIMEQSPRYFIVSRSGM-----IKIVA AVAYSKGFYVACSESI VLOYHYT
TtFAP57B  IEVLKQSPVFINKQS-----WRIECINTYSKGFIVGAKDSSIYVYRAT
TtFAP57A  KTI LASSPKNEQ-----FAIQCIQPYSKGFLVGGKECTILFYEKD
Dm        DTVLDMIDQEVFDRDKELQEQRF LPTQAVSLPD-----RRVLCMTAF PKGFAYIIFNRAFVFERVS
  
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487

TtFAP57C EDPDL PYS GAQGKEKNOLIDOLHYLK-EWS--DKKASGVSGMDISSN-EELLVIAFKNNOIATLDLTQVIOQVPQNIKALK
 Hs EEKDF-----YRESREIRIPVDPOS--NDPSOSDKQDVLCLCFSPS-EETLVASTSKNQLYSITMSLTEISKG-----
 Xt EDKDF-----YKRSRDIRIPODEYS--TDPTQSEQQEIVCMCLSPS-EEMVLISTNKGQLYSIALSSAEISKG-----
 Dr EKADL-----YKKTRVIKIPPKRFS--NDLSLTEKQKISTLCISPS-EETLVASTDLGQLYSIHLISIAELOKG-----
 Che DEKEF-----YRKARSFTIENN-----PSRVRYLAVSPN-EEHLICSLENNOMYSLLLSNSEIMKA-----
 Tc DNKEM-----YRKVRTFKFMNDAENMGPPSELIPVILSLALSPPPA-EEYVSFMTSTKQLYSINLPNADFFKS-----
 TtFAP57D QDNDK-----NPFTCVNQFKLKO-----FVELKEIEIKSICMKA-EDKLLIGLDNNOIYIEIKIKPYHPETV-----
 TtFAP57B NDDKN-----RYEEVNRVLFKOYS-----DLKDLVYVTGLSITPHSEDKSIACSLSNNQIYSIKLKRDSIYSS-----
 TtFAP57A VDLKN-----PYKLCSSKIKOFRDMK-----AMITSLLLTPN-EEKLIVGVDSGQLLOVPFTSDSMQLN-----
 Dm KFKFE-----RKTILTVP-----TNLYAEHMYQILNLAIDHK-QETVIVITTSHCQIYVGILIVPETLKT-----

568

TtFAP57C RDHNQRDRRDVQFDYLYKGFHNGPISSIDVCIORPLLVTCCSQDNSIIWNYASYKCELARKFPVSLNNDENRQVLLSVA
 Hs -----EPAHFEYLMPPLHSAPITGLATCIRKPLIATCS-LDRSIRLWNYETINTLELFKEYQEE-----AYSIS
 Xt -----EDAYFEYLTESWHSSSITGLSICVRKPLIATCS-LDRSVRIWNFENNTLELYKEYQEE-----AYSVA
 Dr -----ECAYFEYLSHSFHNNIITGLSTCIRKPLIATSS-LDRSVRIWNFETNVLELYKEYQEE-----AYSVA
 Che -----DEMNFVLTGNNHOGPIITGMDICIRKPLIATVS-TDKSVRLWNYVDRTCELTCKFFADE-----IYSVA
 Tc -----DERVFEPIGOPFHS GAVIAVDVSVORPHAVTAG-RDRCIFLWNLITGVVEFRKRFS SD-----IHSIA
 TtFAP57D ---NNDSS EDREVTLINHLNHTGPINSMDICKRKP IATCS-TDKTIKIWDYEKKQIKISWAFNEE-----AFCLS
 TtFAP57B -----DSDEQIEQVSLAFHSGP INGMDCIRKPLIATCG-KDKTIKVMWNYEEKTLELSWLFNEE-----AYCIA
 TtFAP57A -----EENSKCEPLFMPFHS DKITGLDVCIRKSLVATCS-VDKTVRIWNYSDNOLENSKEFEE-----AYAVA
 Dm -----KOLKFEPLGVLIIHTGEI IAMSVC AWKPIIMTAS-RDQTI RIWNYETALVELVRKFQVD-----VNIVE

649

TtFAP57C FHPTGYLLAAGFFDKLRMYHVLND-----KLRTYREIS-VKNCTIIRFSNGGQYIAAGSPI SKFNKGANMGGAGTSTNSQ
 Hs LHPSGHFIVVGFADKLRMLNLLID-----DIRSFKEYS-VRGCGECFSFNGGHLFAAVNG-----
 Xt LHPSGLYVLVGFSDKLRFMNLLID-----DIRSVKEFT-VRGCKECAF SHGGHLFAAVNG-----
 Dr LHPTGLYILVGFADKLRMLTLLMD-----DIKIFKEFT-IRNCRECTFSHGGHLFAAVNG-----
 Che IHPNGLQILVGFADKLRMLTVLME-----ELKS IKELG-IKGCRECCFSTGGEYFAAVNG-----
 Tc MHPSGLHLLVGLTDGLRMMNLFHN-----DVREFKNIG-IRSCMECRFSTGGOFFAAHA-----
 TtFAP57D LHPOGFCVAVGFLDKLRMLNLCIHNSQNTTKNKAYKEISPFGKCKEIKFSNGGQYFAAVNSTSSN-----
 TtFAP57B LHPSGLHMIVCLNDKLRWMNICLHQSNSNKSKHYKEITQFKQCKEVRF SNGGHYFAAIDGTQSS-----
 TtFAP57A FHPSGFHII VAFTEKIRLMNIFEN-----DLISFKELS-VKNCREI OFSNGGHFFAITNV-----
 Dm LSLTGMAAIGFS DQLRITQIFMD-----DLNIVKTYN-FPHCNAVRYSNFGHMMAAAYD-----

730

TtFAP57C FQNSNALQTGKKS VNYVINIYNAYTLENIT--CLKGHTGAVTDLIWTG-GDKKLYSCGEDGQIYVYTTDSWE--KDKIKL
 Hs -----NVIHVYTTTSLLENIS--SLKGHTGKIRSIVWNA-DDSKLISGGTDGAVYEWNLSTGK--RETECV
 Xt -----NVIHICYTATFENIT--NLKGHNKVRSAVWSS-DDSKLVSCGLDGAVYEWNILLGK--RESECV
 Dr -----NVINIYSTITFEEIL--NLKGHNEKVOAVAFSL-NDSCLVSCGMDGAVYEWNTLSGT--RESECI
 Che -----TTISIYNTYTCENVG--NLRGHNGKVRSLFWS-DDSR IISAGMDGAVYEWRLKDFK--REKENV
 Tc -----TTIHVYTYTCELLG--HLRGHS GKVTIFFVPPDDTRLVSVGLDGAVHEFNLCDFH--KVNDNV
 TtFAP57D -----HVIQVFKFFTGENPSQLVFKGHTGRVKCIAWSS-DDSFLVSCGLDGMILAWKLDQDFQ--HQOTIV
 TtFAP57B -----QLIKVRFYTGEPQPSLVFKGHTGRVKS LAWSK-DDSLLASCVDGMVYIWRIDNDSGDLRLYENS
 TtFAP57A -----SMVOVFQFYTGENPSNLVFRG-SGKVRTIFWEE-DDOGFYTGSTGLVIYWRVDDNGPQ--KTOIAQ
 Dm -----NNIAITSVYKLDVLI--NLKGHNGIVLSVAWSR-TDKFLISGGAE GAIYLWDIETGA--RLQEIF

811

TtFAP57C KTPNVKLSML--YNEPQGI L MVIGPDDV NKG GYIQT VRFRRDR-----DEICD
 Hs LKSCSYNCVTV-----SPDAKIIFAVGSDHTLKEIADSL-----ILREI
 Xt LKSCSYSSVAM-----SSDSKTIFAVGSDOTLKEISDSQ-----IMREI
 Dr LKTCSTYGVAI-----SPDAKTFFAVGTDCSLKEIHNSQ-----ILKEM
 Che LKGCNYSVLA-----IPDCKTYAAGSDKKIKEFEEAPGAG-----TQITKEI
 Tc LKAMTYNCGVA-----DVG--TVWTAGNDOKLROFDRTK-----LOPVAEY
 TtFAP57D PRIVDIHNKGVNFSGLTLTVDNKTI VAVGNDRHIHQAVINEQQ-----PVDKTDK
 TtFAP57B HKSIQLSCVALN-----MDTQMIYSCGSDRFLHQGFIFD-----SSQARK
 TtFAP57A FNNLIITSITGL-----YNPDTTTOGLERILFVSGVSSSOENEGEKCVYKLVISCRQDKEGREITDNTLKKIYVSOPEOK
 Dm OKGTEYVTIISC-----TNDPLTIYAGTSIGTIREFQDST-----LVREITI

892

TtFAP57C TQIKNYHISSTFNKCIYNTGLIAGTSTG--QIRVYPSLFAOOPFDSIP-----THNGOVSHIIASKDGRF
 Hs SAFDVTYTAIVISHSGRMMF-VGTSVGTIRA-----MKYPLPLOKEFNEYQ-----AHAGPITKMLLTFDDQF
 Xt PFDVYTTAVAVSHSGRMIF-TGTS LGTIRS-----MKYPLPLOKEFNEYQ-----AHAKPVTRLVVTFFDDQY
 Dr SSRDVVCTTVALSRSGRIIF-IGTSTGLRV-----IKYPLMIQNDWIEYO-----AHAGPITKMVITFDDQF
 Che DAGTNLTQVGLMPNAKVMFA--ATESGALRT-----YKFPLT--GEFOEIK-----SHSSITRLRMTWDEQL
 Tc DLONASLYSMVISPKLKLLI--GGAGDGTVRV-----FNTYLGKLSGMERERGNNGGEIMIESHNAHS GIVTRLALTFDESL
 TtFAP57D KLLDINLSCLAFFSSNKLLF--AGIQDDARSSGAI RCFIYPLTH-GKFTDYO-----AHDERGVEKMKITNDDRY
 TtFAP57B INQEVQLNQIAFTSTNKIMF--AGIADQRSSGAVRCILFTTPTNNKFYDYP-----AHDEQIEKLRITYDDKY
 TtFAP57A IFTGTNVSQIAISHSKLFF--FATEDRPGAIRITKYPTFN--EIMEIQ-----SHF--GPITRMRISFKDNY
 Dm PSRTKGSVSDVCLARSDLIM--FVADHEGNLNFMLPFL EAGGGTFTNFR-----FFDGPVNKLRFSYDGLT

973

TtFAP57C LFTGGKDGSVFIFKVSSELNAEGHSIKADONDTAIAVDEK LADVVLVERQEIFDVYLGEOKKLKEEYENLENKMEIQALEEKN
Hs LLTAAEDGCLFTWKVFDKDRGKIK-RERE-----VGFAEEVLVTKTDMEEKAOVMLELKT RVEELKMENEQRLRLKDM
Xt LLSVSEEDGCLILWKISDKEGRGLK-RDKE-----VGAAEVLITKSDLEEKNOVMLELKT RVEELKMENEQRLRLKDM
Dr LITVSEEDGCLFIWKIIDKEGQGLK-REKE-----LIYSEEILTNKLD FDEKSKMLLELNKAVEELOEDNKCQLSLKDT
Che LVTASDDGCIFVYDVKDKDAKAAARRDQER-----MDWAVEVLVTRSELDEKKS RMSELEQOVAELTMQTEYQLRLKDL
Tc VVSVGEDGAVIFWDVVPYRGPHE-----VEYSREIFMANS DLEESTKTVSALAEVNELKORMQQOOIKRDR
TtFAP57D IITAGKDGCMVFEIKDKDARGMKLKDGYA-----KYSEELIITRDLDD LKSTRDGLIVQINEF SNQNAMIGLNSRD
TtFAP57B LITAGRDCIMLFEIKDKDARGMRLKEGYB-----KNAEEILVTRD LDDDKNTIDNYOSLIGEFNNQTLNNTQNKD
TtFAP57A IFTAGEDGALIIYENKEKEYQVKIENESVE-----AAEEFLIPRD QYNDQKREIEKLRQLNEERMKQEQOIKKMK
Dm LFAISNKGTLAIWAMDNI EGKVPYMDQDLM-----RSQEVLI PRSQLNDKIEQIANLELR LKQAAEEFQYQLSQNEI

1054

TtFAP57C KMEREIKEMETKMRTEIKSYEORYEDLKFOKNRNEKEHGGLLKELEKTHLKAIEELENLYEKKLAFENEKFLOOQEQELIEE
Hs NYSEKIKELTDKFIQEMESLTKNOVLRTEKEKQDVYHHEHIEDLLDKOSRELQDMECCNNO KLLLEYEKYQELQLKSORM
Xt NYNEKIKELTEKFIQEMEVLTQNOILKTDSEKQDIKHQEDVAELLEKQSREIQDLETSNSQ KLLLEYEKYQELQLKSORM
Dr EYNKKINELSEKCMQOIIISLNAEKEVLKKEKDNQOEAHNKAISDILERHDKELHDMES SNNQKMLMEYKYQELQLKLVN
Che HLOERVKELTDKFTAELADROKPELLLOEKNEQEMEYEEKL LAEERSQVOLSTLDTQYQAKIMAEVERFOOLTQEKELL
Tc VHEEOLLKMEQYADEOARRLAQYEAALKADKNEOAIQFTDFMAEMEAKKEALKRTKEDYSVKIOSLRDRADRLROLIDEI
TtFAP57D DRIROLETOIENNSQKRKQMFQQLKSKTMEEOKLQIEINEIKEQFEQEQI QVMDTKYQKEVMSLVVEEYENQKRLHEIENNK
TtFAP57B EQIKQLQERLQKSLLEHNKTAYEQLEKRRDIEKKYDEELKIMKEKFEAEIQ ELDTSYQRKVMDEVEKHE SVKKVHEIQRNK
TtFAP57A DRDDKINOLENOOKDSMDRDLNKYOLLERENEMIESYEEKRMMKLOH ENNKRTIENEYKKAIALEMSRNEELAREKEKE
Dm FDGQQLQEVHRSYCSALEELKELNNEI EARHTEEMNHITFQINSIREEHR IQDLTLATQYSERMLIEYQKFTNLRENMLEL

1135

TtFAP57C RMKFEKKLKEIERKHDDNINSLKYEFNDNFQAKQVYDSTKOTADDLRKIYEERLAQQEEEHEQEIRDLNENHKKIEITKLV
Hs QEEYEKQLRDNDETKSOALEELTEFYEAKLQEKTTLLLEEAQEDVRQOLREFEETKKQIEEDEDREIQDIKTKYEKKLRDEK
Xt QEEYEKOLHELEESKIOALEETTEHYEAKLOEKMSVLQLTODESROHLREFEETKKQIEEDGDREIQDMKIRYERRLREEK
Dr QOYEYQOLHSMESKTOALEDMQSYEAKMEEKMILVNQYODESQORFKFEFEHIREEDTDAEIHDIRMKYEQNLREEK
Che NERWDEONSLIVE SHERVIAELTEDYEAKLAEEESLQIEQLQEKAELEREFEETIKRQLEEDADREIEELKEKYESKLATER
Tc QHEODAHLAEVREAAA KRAEDNERORKVLKELEENHQLLMEDEDTKRTENYCALIEDETDVEVTLKEDVEKRRKEOE
TtFAP57D NNNKKTKLLOEHSQKLOIIDDQYQKLLLEEQITOKERV---EKQINHLQEKQOEVLMQISEEKETEIKNLNQNKSKDEQAIT
TtFAP57B NNRERQOKAMQCOMAQSLDQEQYQK LHEERSORERV---QNDIDKMOKDNDEIYRQIEQETKEEIEENLNKNLEHEAEVK
TtFAP57A EKR--FOSEIOOYOEHLROMEEKRRHYEEOLAIEK---OLYNDLHLKREELAYKFDOKRNLMEAAEELIDOLKEENES
Dm RESYEDKLNKSTGTLQDITVEALENNYKQQLNERKELIRDLMKEMQDKKAEFIEYCREVELENDRN MVSTQTEYENKLTTER

1216

TtFAP57C KDLALAEFEKKNKFDDEDNKKAKENITRLDKKIEDQDN-----EIQYQKSRLTDASNOIEALKKDIISLEDLVKKKEKKIHE
Hs ESNLRLKGETGIMRKKFSSLQKEIEERTNDIETLKG-----EQMKLQGVIKSLEKDIQGLKREIQERDETIQDKEKRIYD
Xt ESSLRLKGESGIMRKKFSSLQKEIEERAADIEKMK-----EOKLQGVIKSLEKDI LGLKREIQERDETIQDKEKRIYD
Dr KAHSKLKVLDLTKRFRHDLQREIENGLEIEK LKQ-----EVORLQAVIKSLENDITGLKTAIQNRDGI IQDKEKNIFO
Che ESSLRKLGENGIMRKKFNALQKDIEAQKEEIKNLFE-----QKRELYATIASLEKD IASLKREIRERDETIQDKERRIYD
Tc EEVATLOTNNDLLLSRENIKAELEAVKADVREKLR-----QOOSTLESOIEAAKRDIGALTOEFKDRGETIAEKERVLD
TtFAP57D DQGLKAKSDISITKIMQQQQEAQDLKEQKQEYER-----QKEKLIKIONQELRDKIDGOKKIILERDR TIGEKEKIIYN
TtFAP57B ERHKKAKSDAAITTKKIDQKKKDS EYQYEEQFRLHQK-----QLKKLREENETLLKEIQQQKEI IQERDKTIGKQEKQIYK
TtFAP57A KMOVLFKNLEKAEIKKMDRRNDYDTEAOKLEEOKSKL KGTMEDITSIQETNKMLOKEKESHAK EIDERKTIRDKGRRIYD
Dm NETQMWRGKAGVLQKKFESQSREIDNLLLEEVEILKE-----EHHKSQNIQKQMRNI EDLQKDIADR DYAINGKEKRIQD

1297

TtFAP57C YKYKINDLQKSKHVLSFRRTTEMRKSLPEKKEQIEKQKEQLCKLESEFEGLLVSEARNDKMKMQSQIENLNKNLKLOTEL
Hs LKKKNQELGKFKFVLDYKIKELKKQIEPRENEIRVMKEQIQEMEAELENFHKQNTQLELNI TELWQKLRATDQEMRRERQK
Xt LKKKNQELEKFKFVLDYKIKELKKQIEPRENEIKEMKEQIQEMES ELERFHKQNSQLDLNIAELKQK LKATDREMHKERQK
Dr LKKKNQELNKTLEVMEFRAEYMQEQIEPKENEIQQQKDMQVCEFMKPHFAHH-----
Che LKKKNQELEKFKFVLDYKIKELKKQIEPREQ EISDMKEQIKEMDGELERYHKTNSGLD LLI SNLKLKQEG LQOEVMTORTG
Tc LKKKNQELEKFKFVLEYYKIKELKLOIDPRDEEIROAKSRLSEMGKEADNYTHSNEHLVLOIRNLRHKKAGOOKELDKLAEI
TtFAP57D LKKKAQDLEKFKFVLDH KIKELKRDIVPREDEITKMKQETNNMDQYLKELNAYNNYLGTVVDELYTTQETMKEDIKQORQO
TtFAP57B OKKKSONLEKFKFVLDH KIKELKRDIGPREDEIARMKEETNQMDQLLKKYNSYNNHLGN AVDELYTAQELMNSEIKNORTV
TtFAP57A LKKKTQELEKFKFVLDYKIKELKRDIGPKEE IAKMKEQIANMNSEILHFKRTNANLKLIVTDLRLRQEGMKKEIEDOSKV
Dm LLHKNOELDKYQVLGHKIAELKAQIEPREFQINDKRKH IIEMAEAELEGLNQNNVQLELQ LKEMRDKYLSNVAELRTERHR

1378

TtFAP57C TKOKENILNKIIMEIHD SVTYKQDPK-FLAQEMOKLYOTYVLKT----EHKOKO-YDNKGVOEMGROIQH LNKTIQOISES
Hs ERDLEALVKRFKTDLHNCVAYIQEP-RLLKEKVRGLFEKYVQRADMVEIAGLNT----DLQQEYTRQREHLERNLATLKKK
Xt VRDIEAVVKRFKTDLHNCVGF IQEP-KMLKDNIRELYSKYVQSDVAEIVGVDA----DIQREYARQREHLERSLSTLQKK
Dr -----
Che KSDAEQLLKRMOHDLQAIIPYFOEP-KDLKEQVKALYHKYCGNOPLRTEEDADL-----EREAARQREYLEKTVDTLKRK
Tc MRGFAEYLSRLWTELSCLREETNP--RKLKECAKMLFDKYTSTRKAVAANKTLASRTAADEVREYNRRDHLERNLAGLKNK
TtFAP57D ISVQOVKISRFKDDVYSLAQHILDYD-KLVDETERLFMKHVNDKEVKROSVEGD-----IMMEYRSOKKNLEKLVNMFKKS
TtFAP57B ISSTNNKIKRFKDDLYKAVQHIQDYE-KLQOHVNELEKRLYANKNIERNKNDQI-----LOEYENQKAHLQYKVRLLKKY
TtFAP57A IQONNOYIKAFEQDMSDCHOHIADYK-KLKQKVLNLYNOYVQGDSSKKKRLENN----DOOKEIMKERAHLET SVNNLKI K
Dm AKASRECLHSICS DIYYVAGEINSAE-ALKKAVKELFRKHASDDELKRFVTLDA----EVRDEFMRQRKQIENVLDRYKSV

1459

TtFAP57C SNKLLDRRYQDIFNKTKENAELIYDLNDRKONKEFOSQIILNLRMKEDKYIKEIANLKTEIQKLLKGGPGGSSKKNNMMO
Hs VVKEGELHRTDYVRIMOENVSLIKEINELRRELKFTRSOVYDLEAALKLTKKVRPQEVSETEPSR-DMLSTAPTARLNEQE
Xt LAKDTEIHRITDNVRVMQENVTLIKEINDLRRELKLSRTKVHDLLEAILGLNKKTRKNNATELKVSSSEGLHPVGVLRRLNSEE
Dr -----
Che LAKDSELHRTDNLRIQENTALIKEINELRREIRTLKSRVAGINGAVNLSVTGRRPGSPGDSLMLSEGLKRELEMORDLIT
Tc VNKDAENNRSDKNRITTEENVILIREINDLRKEARRLAEKAGAWRKTEKCAASLQOQEEFKRELAMQRAELKRLRALARKLAE
TtFAP57D LQKDNQIHKDDKIRIMKDNVDLIREINTLRKSIKDITKGOOSNIPDQKGOTOHMPLOTQPSRKSISQVLPPIPKSAMFE
TtFAP57B LKQDNQIHKDYNLGLMSNNVNLIKEINILRKOIKDIQKGGGTGKPAEHARSLTTSFKRARTAGVRSNSKNGNRPDEIDE
TtFAP57A HDKNQSVHKSDDTIIMKHNTFLIFEINHLKREKKKILEDKAKMLMQATQKKKQDGTSRVDIDSLEKEIQKNEDEKRKLKED
Dm AEDKSVQKKYD--KLFKENVILIEEIEKLNENKMLRSKVKEDLRRSTKTIHK-----

1540

TtFAP57C LPPAQQMQQQYDEQRONVNSVOOTORNFFSOSQGOVQSNQRPOSQMKIGOKGTICRGKNFDTKTLAIFDKAKMMDMTAEM
Hs ETGRIIEMORLEIQRLRDOIQEQEQTGFHTLAGVRLPSSLNSQVLDLEVKTN-----
Xt ETDRIIDMQRLEIKRLRDLIQSQELTQGVRRPPSVGRIPALTMTTDRGIREFPWDR-----
Dr -----
Che RLREETAAKEARIROLESMIAPRPTSRERLPPMEGFPGSMPPERISSSLMKGESRPPSAAILPPGIMEQEAVA-----
Tc EAREKGITLTLPSLTEGRPGS-----
TtFAP57D GVTQONEIQKSHTOINPELVEEKQKVLNSLOTDILELOKVYEALNYEKHNLTA-----
TtFAP57B ALNDPAIQKQKQILVMQSDITQLRVQLEELHEENRALTVSNNF-----
TtFAP57A IEKLRQYNDQIKNQLRQOIQNQDDDEDN-----
Dm -----

1621

TtFAP57C ELNTOKLLQQEVLIKSIIRRKIHKHVIDRACNDIAFEELMALQAQEQGGFIPLOQQDIDTSDDNIIYQAEQRQYSRK
Hs -----
Xt -----
Dr -----
Che -----
Tc -----
TtFAP57D -----
TtFAP57B -----
TtFAP57A -----
Dm -----