biopython Data_usingEntrez

November 24, 2020

[84]:
```
from Bio import Entrez # We import the entrez tool from the Parent 'Bio'. Bio␣
 ↪has all
# the methods and classes of all tools. It's the top of the hierarchy.
Entrez.email = "A.N.Other@example.com"
# Create a file handle where we search the db 'snp' and set our max return␣
 ↪value at 10k and
# and the term is set to the a name of what we are interested in.
handle = Entrez.esearch(db ="snp", retmax = 1000, term="PD-1")
# Next we define a variable that will hold our esearch output.
record = Entrez.read(handle)
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[32]:
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print(record)
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snpidList = record["IdList"] # Defined a variable that will hold the list␣
 ↪output of 6403 SNPs
# Used the 'efetch method to grab the information based on the list that we␣
 ↪have used with
# the SNP ids.
#get the SNPs uilist for each gene.
handle = Entrez.efetch(db="snp", id=",".join(snpidList),rettype="uilist",␣
 ↪retmode="text")
print(handle.read())
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[35]:
```
print(len(snpidList))
```

```
1000
```

[36]:
```
## Send the snp ID List to a file
## import operating system module
import os
snpidList = record["IdList"]
file = "/Users/zunqiuwang/Desktop/PD1_snp_list.txt"
if not os.path.isfile(file):
    handle = Entrez.efetch(db="snp", id=",".join(snpidList),rettype="uilist",␣
 ↪retmode="text")
    out = open(file, "w")
    out.write(handle.read())
    out.close()
    handle.close()
```

[9]:
```
db=Entrez.einfo()
dblist=db.read()
print(dblist)
```

```
<?xml version="1.0" encoding="UTF-8" ?>
<!DOCTYPE eInfoResult PUBLIC "-//NLM//DTD einfo 20190110//EN"
"https://eutils.ncbi.nlm.nih.gov/eutils/dtd/20190110/einfo.dtd">
<eInfoResult>
<DbList>

        <DbName>pubmed</DbName>
        <DbName>protein</DbName>
        <DbName>nuccore</DbName>
        <DbName>ipg</DbName>
        <DbName>nucleotide</DbName>
        <DbName>structure</DbName>
        <DbName>sparcle</DbName>
        <DbName>genome</DbName>
        <DbName>annotinfo</DbName>
        <DbName>assembly</DbName>
        <DbName>bioproject</DbName>
        <DbName>biosample</DbName>
        <DbName>blastdbinfo</DbName>
        <DbName>books</DbName>
        <DbName>cdd</DbName>
        <DbName>clinvar</DbName>
```

```
        <DbName>gap</DbName>
        <DbName>gapplus</DbName>
        <DbName>grasp</DbName>
        <DbName>dbvar</DbName>
        <DbName>gene</DbName>
        <DbName>gds</DbName>
        <DbName>geoprofiles</DbName>
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        <DbName>medgen</DbName>
        <DbName>mesh</DbName>
        <DbName>ncbisearch</DbName>
        <DbName>nlmcatalog</DbName>
        <DbName>omim</DbName>
        <DbName>orgtrack</DbName>
        <DbName>pmc</DbName>
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        <DbName>sra</DbName>
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        <DbName>biocollections</DbName>
        <DbName>gtr</DbName>
</DbList>

</eInfoResult>
```

[37]:
```
handle = Entrez.esearch(db ="cdd", retmax = 10000, term="PD-1")
# Next we define a variable that will hold our esearch output.
record = Entrez.read(handle)
print(record)
```

```
{'Count': '2', 'RetMax': '2', 'RetStart': '0', 'IdList': ['386229', '319337'],
'TranslationSet': [], 'TranslationStack': [{'Term': 'PD-1[All Fields]', 'Field':
'All Fields', 'Count': '2', 'Explode': 'N'}, 'GROUP'], 'QueryTranslation':
'PD-1[All Fields]'}
```

[38]:
```
cdd_list = record["IdList"]
handle = Entrez.efetch(db="cdd", id=",".join(cdd_list),rettype="fasta",␣
 ↪retmode="text")
record = Entrez.read(handle)
```

```
print(record)
```

```
['386229', '319337']
```

[43]:
```
proteins = Entrez.esearch(db ="structure", retmax = 600, term="PD-1")
# Next we define a variable that will hold our esearch output.
record = Entrez.read(proteins)
#print(record)
protList = record["IdList"]
handle = Entrez.efetch(db="structure", id=",".join(protList), rettype="gb",␣
↪retmode="text")
record1 = Entrez.read(handle)
print(record1)
```

```
['194264', '193242', '193241', '192186', '191703', '191702', '191701', '191700',
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'91042', '91041', '79053', '69814', '65478', '65477', '62725', '62724', '26763']
```

[77]:
```
#search protein id on pd-1 with FASTA
Fastap = Entrez.esearch(db ="protein", rettype="fasta", retmax = 600,␣
↪term="PD-1")
record = Entrez.read(Fastap)
protid = record['IdList']
```

[79]:
```
#fetch protein id on pd-1 with FASTA
from Bio import SeqIO
handle = Entrez.efetch(db="protein", id= ",".join(protid), rettype="fasta",␣
↪retmode="text")
records = SeqIO.parse(handle, "fasta")
out = open('/Users/zunqiuwang/Desktop/PD1_fasta seq.txt', 'w')
for record in records:
    out.write("%s has sequence %s" %(record.id, record.seq) + '\n')
```

[86]:
```
#search protein id on pd-1 with gb
handle = Entrez.esearch(db ="protein", retmax = 600, rettype = 'gb',␣
↪term="PD-1")
record = Entrez.read(handle)
gbid = record['IdList']
print(gbid)
```

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[87]:
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#fetch gb file of pd-1
from Bio import SeqIO
handle = Entrez.efetch(db ="protein", id= ",".join(gbid), retmax = 600, rettype␣
↪= 'gb', term="PD-1")
out1 = open('/Users/zunqiuwang/Desktop/PD1_gb.txt', 'w')
out1.write(handle.read())
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[87]:
```
1848367
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[72]:
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#search pubmed id on pd-1 #a list of publications IDs for each.
handle = Entrez.esearch(db ="pubmed", retmax = 600, rettype = 'gb', term="PD-1")
record = Entrez.read(handle)
pubmedid = record['IdList']
print(pubmedid)
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[75]:
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#fetch pubmed journal info on pd-1
from Bio import SeqIO
handle = Entrez.efetch(db="pubmed", id= ",".join(pubmedid), rettype="abstract",␣
 ↪retmode="text")
out = open('/Users/zunqiuwang/Desktop/PD1_pubmed journals.txt', 'w')
out.write(handle.read())
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[75]: 1602283

[47]:
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##Create a file with the protein sequence for each gene.
gb = Entrez.efetch(db = "protein", id = ",".join(fastaList), rettype ="fasta",␣
 ↪retmode ="text")
print(gb.read())
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>NP_032824.1 programmed cell death protein 1 precursor [Mus musculus]
MWVRQVPWSFTWAVLQLSWQSGWLLEVPNGPWRSLTFYPAWLTVSEGANATFTCSLSNWSEDLMLNWNRL
SPSNQTEKQAAFCNGLSQPVQDARFQIIQLPNRHDFHMNILDTRRNDSGIYLCGAISLHPKAKIEESPGA
ELVVTERILETSTRYPSPSPKPEGRFQGMVIGIMSALVGIPVLLLLAWALAVFCSTSMSEARGAGSKDDT
LKEEPSAAPVPSVAYEELDFQGREKTPELPTACVHTEYATIVFTEGLGASAMGRRGSADGLQGPRPPRHE
DGHCSWPL

>NP_001240779.1 V-set domain-containing T-cell activation inhibitor 1 isoform 3
[Homo sapiens]
MASLGQILFWSIISIIIILAGAIALIIGFGISAFSMPEVNVDYNASSETLRCEAPRWFPQPTVVWASQVD
QGANFSEVSNTSFELNSENVTMKVVSVLYNVTINNTYSCMIENDIAKATGDIKVTESEIKRRSHLQLLNS
KASLCVSSFFAISWALLPLSPYLMLK

>NP_001240778.1 V-set domain-containing T-cell activation inhibitor 1 isoform 2
[Homo sapiens]
MFRGRTAVFADQVIVGNASLRLKNVQLTDAGTYKCYIITSKGKGNANLEYKTGAFSMPEVNVDYNASSET
LRCEAPRWFPQPTVVWASQVDQGANFSEVSNTSFELNSENVTMKVVSVLYNVTINNTYSCMIENDIAKAT
GDIKVTESEIKRRSHLQLLNSKASLCVSSFFAISWALLPLSPYLMLK

>NP_005009.2 programmed cell death protein 1 precursor [Homo sapiens]
MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRM
SPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLK
EDPSAVPVFSVDYGELDFQWREKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPE
DGHCSWPL

>NP_078902.2 V-set domain-containing T-cell activation inhibitor 1 isoform 1
precursor [Homo sapiens]
MASLGQILFWSIISIIIILAGAIALIIGFGISGRHSITVTTVASAGNIGEDGILSCTFEPDIKLSDIVIQ
WLKEGVLGLVHEFKEGKDELSEQDEMFRGRTAVFADQVIVGNASLRLKNVQLTDAGTYKCYIITSKGKGN
ANLEYKTGAFSMPEVNVDYNASSETLRCEAPRWFPQPTVVWASQVDQGANFSEVSNTSFELNSENVTMKV
VSVLYNVTINNTYSCMIENDIAKATGDIKVTESEIKRRSHLQLLNSKASLCVSSFFAISWALLPLSPYLM
LK

>NP_036224.1 inducible T-cell costimulator precursor [Homo sapiens]
MKSGLWYFFLFCLRIKVLTGEINGSANYEMFIFHNGGVQILCKYPDIVQQFKMQLLKGGQILCDLTKTKG
SGNTVSIKSLKFCHSQLSNNSVSFFLYNLDHSHANYYFCNLSIFDPPPFKVTLTGGYLHIYESQLCCQLK
FWLPIGCAAFVVVCILGCILICWLTKKKYSSSVHDPNGEYMFMRAVNTAKKSRLTDVTL

>NP_037410.1 interleukin-17C precursor [Homo sapiens]
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MTLLPGLLFLTWLHTCLAHHDPSLRGHPHSHGTPHCYSAEELPLGQAPPHLLARGAKWGQALPVALVSSL
EAASHRGRHERPSATTQCPVLRPEEVLEADTHQRSISPWRYRVDTDEDRYPQKLAFAECLCRGCIDARTG
RETAALNSVRLLQSLLVLRRRPCSRDGSGLPTPGAFAFHTEFIHVPVGCTCVLPRSV

>NP_035761.1 endoplasmin precursor [Mus musculus]
MRVLWVLGLCCVLLTFGFVRADDEVDVDGTVEEDLGKSREGSRTDDEVVQREEEAIQLDGLNASQIRELR
EKSEKFAFQAEVNRMMKLIINSLYKNKEIFLRELISNASDALDKIRLISLTDENALAGNEELTVKIKCDK
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>pdb|7CU5|Q Chain Q, Programmed cell death protein 1
RPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRFRVTQ
LPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTER

>pdb|7CU5|A Chain A, camrelizumab-scFv
MEVQLVESGGGLVQPGGSLRLSCAASGFTFSSYMMSWVRQAPGKGLEWVATISGGGANTYYPDSVKGRFT
ISRDNAKNSLYLQMNSLRAEDTAVYYCARQLYYFDYWGQGTTVTVSSGGGGSDIQMTQSPSSLSASVGDR
VTITCLASQTIGTWLTWYQQKPGKAPKLLIYTATSLADGVPSRFSGSGSGTDFTLTISSLQPEDFATYYC
QQVYSIPWTFGGGTKVEIKR

>pdb|7CU5|E Chain E, Programmed cell death protein 1
RPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRFRVTQ
LPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTER

>pdb|7CU5|B Chain B, camrelizumab-scFv
MEVQLVESGGGLVQPGGSLRLSCAASGFTFSSYMMSWVRQAPGKGLEWVATISGGGANTYYPDSVKGRFT
ISRDNAKNSLYLQMNSLRAEDTAVYYCARQLYYFDYWGQGTTVTVSSGGGGSDIQMTQSPSSLSASVGDR
VTITCLASQTIGTWLTWYQQKPGKAPKLLIYTATSLADGVPSRFSGSGSGTDFTLTISSLQPEDFATYYC
QQVYSIPWTFGGGTKVEIKR

>pdb|6XKR|P Chain P, Programmed cell death protein 1
WNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRFRVTQLP
NGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPGSGSHHHHHHH
H

>pdb|6XKR|L Chain L, Sasanlimab Fab Light chain
DIVMTQSPDSLAVSLGERATINCKSSQSLWDSGNQKNFLTWYQQKPGQPPKLLIYWTSYRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQNDYFYPHTFGGGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVC
LLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSP
VTKSFNRGEC

>pdb|6XKR|H Chain H, Sasanlimab Fab Heavy chain
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYWINWVRQAPGQGLEWMGNIYPGSSLTNYNEKFKNRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARLSTGTFAYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTA
ALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTK
VDKKVEPKSCAAAHHHHHHHH

>NP_001361554.1 tyrosine-protein phosphatase non-receptor type 11 isoform 4
[Homo sapiens]
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRNGAVTHIKIQNTGDYYDLYGGEKF
ATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRESQ
SHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVLQ
LKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYKN
ILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENSR
VIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHFR
TWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDCDIDVP
KTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETLQRRIEEEQKSKRKGHEYTNIKYSLADQTSGDQSPLP
PCTPTPPCAEMREDSARVYENVGLMQQQKSFR

>NP_861445.4 B- and T-lymphocyte attenuator isoform 1 precursor [Homo sapiens]
MKTLPAMLGTGKLFWVFFLIPYLDIWNIHGKESCDVQLYIKRQSEHSILAGDPFELECPVKYCANRPHVT
WCKLNGTTCVKLEDRQTSWKEEKNISFFILHFEPVLPNDNGSYRCSANFQSNLIESHSTTLYVTDVKSAS
ERPSKDEMASRPWLLYRLLPLGGLPLLITTCFCLFCCLRRHQGKQNELSDTAGREINLVDAHLKSEQTEA
STRQNSQVLLSETGIYDNDPDLCFRMQEGSEVYSNPCLEENKPGIVYASLNHSVIGPNSRLARNVKEAPT
EYASICVRS

>NP_001338026.1 interleukin-15 receptor subunit alpha isoform 7 [Homo sapiens]
MSVEHADIWVKSYSLYSRERYICNSGFKRKAGTSSLTECVLNKATNVAHWTTPSLKCIKPAASSPSSNNT
AATTAAIVPGSQLMPSKSPSTGTTEISSHESSHGTPSQTTAKNWELTASASHQPPGVYPQGHSDTTVAIS
TSTVLLCGLSAVSLLACYLKSRQTPPLASVEMEAMEALPVTWGTSSRDEDLENCSHHL

>NP_001338024.1 interleukin-15 receptor subunit alpha isoform 5 [Homo sapiens]
MTEAWRCLVLSNVTARPENLHLGAYRPGSQASLETPRKKKTHQPKRRMAAWKNLRKRGSEWGHRTECTLE
VPEHDERGGPGGSRACVGITCPPPMSVEHADIWVKSYSLYSRERYICNSGFKRKAGTSSLTECVLNKATN
VAHWTTPSLKCIKPAASSPSSNNTAATTAAIVPGSQLMPSKSPSTGTTEISSHESSHGTPSQTTAKNWEL
TASASHQPPGVYPQGHSDTTVAISTSTVLLCGLSAVSLLACYLKSRASVCSCHPRSAGHTCSVGSVC

>NP_001334275.1 H-2 class I histocompatibility antigen, K-W28 alpha chain
isoform 2 precursor [Mus musculus]
MVPCTLLLLLAAALAPTQTRAGPHSLRYFVTAVSRPGLGEPRYMEVGYVDDTEFVRFDSDAENPRYEPRA
RWMEQEGPEYWERETQKAKGNEQSFRVDLRTLLGYYNQSKGGSHTIQVISGCEVGSDGRLLRGYQQYAYD
GCDYIALNEDLKTWTAADMAALITKHKWEQAGEAERLRAYLEGTCVEWLRRYLKNGNATLLRTDSPKAHV
THHSRPEDKVTLRCWALGFYPADITLTWQLNGEELIQDMELVETRPAGDGTFQKWASVVVPLGKEQYYTC
HVYHQGLPEPLTLRWEPPPSTVSNMATVAVLVVLGAAIVTGAVVAFVMKMRRRNTGGKGGDYALAPGSQT
SDLSLPDCKA

>NP_001317366.1 tyrosine-protein phosphatase non-receptor type 11 isoform 3
[Homo sapiens]

MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQALLQGNTERTVW
QYHFRTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDC
DIDVPKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETLQRRIEEEQKSKRKGHEYTNIKYSLADQTSGD
QSPLPPCTPTPPCAEMREDSARVYENVGLMQQQKSFR

>NP_001316032.1 killer cell lectin-like receptor subfamily G member 1 isoform c
[Homo sapiens]
MKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSGWRWEDGSPL
NFSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKVRL

>NP_001316031.1 killer cell lectin-like receptor subfamily G member 1 isoform c
[Homo sapiens]
MKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSGWRWEDGSPL
NFSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKVRL

>NP_001316030.1 killer cell lectin-like receptor subfamily G member 1 isoform c
[Homo sapiens]
MKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSGWRWEDGSPL
NFSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKVRL

>NP_001316028.1 killer cell lectin-like receptor subfamily G member 1 isoform a
[Homo sapiens]
MTDSVIYSMLELPTATQAQNDYGPQQKSSSSRPSCSCLVAIALGLLTAVLLSVLLYQWILCQGSNYSTCA
SCPSCPDRWMKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSG
WRWEDGSPLNFSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKCPFADQALF

>NP_001300958.1 programmed cell death 1 ligand 1 isoform c precursor [Homo
sapiens]
MRIFAVFIFMTYWHLLNAFTVTVPKDLYVVEYGSNMTIECKFPVEKQLDLAALIVYWEMEDKNIIQFVHG
EEDLKVQHSSYRQRARLLKDQLSLGNAALQITDVKLQDAGVYRCMISYGGADYKRITVKVNAPYNKINQR
ILVVDPVTSEHELTCQAEGYPKAEVIWTSSDHQVLSGKTTTTNSKREEKLFNVTSTLRINTTTNEIFYCT
FRRLDPEENHTAELVIPGNILNVSIKICLTLSPST

>NP_001268905.1 cytotoxic T-lymphocyte protein 4 isoform 2 precursor [Mus
musculus]
MACLGLRRYKAQLQLPSRTWPFVALLTLLFIPVFSEAIQVTQPSVVLASSHGVASFPCEYSPSHNTDEVR
VTVLRQTNDQMTEVCATTFTEKNTVGFLDYPFCSGTFNESRVNLTIQGLRAVDTGLYLCKVELMYPPPYF
VGMGNGTQIYVIAKEKKSSYNRGLCENAPNRARM

>NP_001254635.1 programmed cell death 1 ligand 1 isoform b precursor [Homo
sapiens]
MRIFAVFIFMTYWHLLNAPYNKINQRILVVDPVTSEHELTCQAEGYPKAEVIWTSSDHQVLSGKTTTTNS
KREEKLFNVTSTLRINTTTNEIFYCTFRRLDPEENHTAELVIPELPLAHPPNERTHLVILGAILLCLGVA

LTFIFRLRKGRMMDVKKCGIQDTNSKKQSDTHLEET

>NP_001239545.1 alpha-(1,6)-fucosyltransferase isoform 3 [Mus musculus]
MLLNLGLGSQNPKDCSKARKLVCNINKGCGYGCQLHHVVYCFMIAYGTQRTLILESQNWRYATGGWETVF
RPVSETCTDRSGLSTGHWSGEVNDKNIQVVELPIVDSLHPRPPYLPLAVPEDLADRLLRVHGDPAVWWVS
QFVKYLIRPQPWLEKEIEEATKKLGFKHPVIGVHVRRTDKVGTEAAFHPIEEYMVHVEEHFQLLARRMQV
DKKRVYLATDDPTLLKEAKTKYSNYEFISDNSISWSAGLHNRYTENSLRGVILDIHFLSQADFLVCTFSS
QVCRVAYEIMQTLHPDASANFHSLDDIYYFGGQNAHNQIAVYPHKPRTEEEIPMEPGDIIGVAGNHWDGY
SKGINRKLGKTGLYPSYKVREKIETVKYPTYPEAEK

>NP_001239544.1 alpha-(1,6)-fucosyltransferase isoform 2 [Mus musculus]
MTDLYYLSQTDGAGDWREKEAKDLTELVQRRITYLQNPKDCSKARKLVCNINKGCGYGCQLHHVVYCFMI
AYGTQRTLILESQNWRYATGGWETVFRPVSETCTDRSGLSTGHWSGEVNDKNIQVVELPIVDSLHPRPPY
LPLAVPEDLADRLLRVHGDPAVWWVSQFVKYLIRPQPWLEKEIEEATKKLGFKHPVIGVHVRRTDKVGTE
AAFHPIEEYMVHVEEHFQLLARRMQVDKKRVYLATDDPTLLKEAKTKYSNYEFISDNSISWSAGLHNRYT
ENSLRGVILDIHFLSQADFLVCTFSSQVCRVAYEIMQTLHPDASANFHSLDDIYYFGGQNAHNQIAVYPH
KPRTEEEIPMEPGDIIGVAGNHWDGYSKGINRKLGKTGLYPSYKVREKIETVKYPTYPEAEK

>NP_001239543.1 alpha-(1,6)-fucosyltransferase isoform 1 [Mus musculus]
MRAWTGSWRWIMLILFAWGTLLFYIGGHLVRDNDHPDHSSRELSKILAKLERLKQQNEDLRRMAESLRIP
EGPIDQGTATGRVRVLEEQLVKAKEQIENYKKQARNGLGKDHEILRRRIENGAKELWFFLQSELKKLKHL
EGNELQRHADEILLDLGHHERSIMTDLYYLSQTDGAGDWREKEAKDLTELVQRRITYLQNPKDCSKARKL
VCNINKGCGYGCQLHHVVYCFMIAYGTQRTLILESQNWRYATGGWETVFRPVSETCTDRSGLSTGHWSGE
VNDKNIQVVELPIVDSLHPRPPYLPLAVPEDLADRLLRVHGDPAVWWVSQFVKYLIRPQPWLEKEIEEAT
KKLGFKHPVIGVHVRRTDKVGTEAAFHPIEEYMVHVEEHFQLLARRMQVDKKRVYLATDDPTLLKEAKTK
YSNYEFISDNSISWSAGLHNRYTENSLRGVILDIHFLSQADFLVCTFSSQVCRVAYEIMQTLHPDASANF
HSLDDIYYFGGQNAHNQIAVYPHKPRTEEEIPMEPGDIIGVAGNHWDGYSKGINRKLGKTGLYPSYKVRE
KIETVKYPTYPEAEK

>NP_001230468.1 interleukin-15 receptor subunit alpha isoform 3 [Homo sapiens]
MSVEHADIWVKSYSLYSRERYICNSGFKRKAGTSSLTECVLNKATNVAHWTTPSLKCIRDPALVHQRPAP
PSTVTTAGVTPQPESLSPSGKEPAASSPSSNNTAATTAAIVPGSQLMPSKSPSTGTTEISSHESSHGTPS
QTTAKNWELTASASHQPPGVYPQGHSDTTVAISTSTVLLCGLSAVSLLACYLKSRQTPPLASVEMEAMEA
LPVTWGTSSRDEDLENCSHHL

>NP_001189368.1 natural cytotoxicity triggering receptor 3 ligand 1 precursor
[Homo sapiens]
MTWRAAASTCAALLILLWALTTEGDLKVEMMAGGTQITPLNDNVTIFCNIFYSQPLNITSMGITWFWKSL
TFDKEVKVFEFFGDHQEAFRPGAIVSPWRLKSGDASLRLPGIQLEEAGEYRCEVVVTPLKAQGTVQLEVV
ASPASRLLLDQVGMKENEDKYMCESSGFYPEAINITWEKQTQKFPHPIEISEDVITGPTIKNMDGTFNVT
SCLKLNSSQEDPGTVYQCVVRHASLHTPLRSNFTLTAARHSLSETEKTDNFSIHWWPISFIGVGLVLLIV
LIPWKKICNKSSSAYTPLKCILKHWNSFDTQTLKKEHLIFFCTRAWPSYQLQDGEAWPPEGSVNINTIQQ
LDVFCRQEGKWSEVPYVQAFFALRDNPDLCQCCRIDPALLTVTSGKSIDDNSTKSEKQTPREHSDAVPDA
PILPVSPIWEPPPATTSTTPVLSSQPPTLLLPLQ

>NP_001186273.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM

SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001186272.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001186271.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001186270.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_751950.2 interleukin-15 receptor subunit alpha isoform 2 precursor [Homo
sapiens]
MAPRRARGCRTLGLPALLLLLLLRPPATRGITCPPPMSVEHADIWVKSYSLYSRERYICNSGFKRKAGTS
SLTECVLNKATNVAHWTTPSLKCIKPAASSPSSNNTAATTAAIVPGSQLMPSKSPSTGTTEISSHESSHG
TPSQTTAKNWELTASASHQPPGVYPQGHSDTTVAISTSTVLLCGLSAVSLLACYLKSRQTPPLASVEMEA
MEALPVTWGTSSRDEDLENCSHHL

>NP_059508.2 inducible T-cell costimulator precursor [Mus musculus]
MKPYFCRVFVFCFLIRLLTGEINGSADHRMFSFHNGGVQISCKYPETVQQLKMRLFREREVLCELTKTKG
SGNAVSIKNPMLCLYHLSNNSVSFFLNNPDSSQGSYYFCSLSIFDPPPFQERNLSGGYLHIYESQLCCQL
KLWLPVGCAAFVVVLLFGCILIIWFSKKKYGSSVHDPNSEYMFMAAVNTNKKSRLAGVTS

>NP_001129245.1 spermatogenesis-associated protein 2 [Homo sapiens]
MGKPSSMDTKFKDDLFRKYVQFHESKVDTTTSRQRPGSDECLRVAASTLLSLHKVDPFYRFRLIQFYEVV
ESSLRSLSSSSLRALHGAFSMLETVGINLFLYPWKKEFRSIKTYTGPFVYYVKSTLLEEDIRAILSCMGY
TPELGTAYKLRELVETLQVKMVSFELFLAKVECEQMLEIHSQVKDKGYSELDIVSERKSSAEDVRGCSDA
LRRRAEGREHLTASMSRVALQKSASERAAKDYYKPRVTKPSRSVDAYDSYWESRKPPLKASLSLRKEPVA
TDVGDDLKDEIIRPSPSLLTMASSPHGSPDVLPPASPSNGPALLRGTYFSTQDDVDLYTDSEPRATYRRQ
DALRPDVWLLRNDAHSLYHKRSPPAKESALSKCQSCGLSCSSSLCQRCDSLLTCPPASKPSAFPSKASTH
DSLAHGASLREKYPGQTQGLDRLPHLHSKSKPSTTPTSRCGFCNRPGATNTCTQCSKVSCDACLSAYHYD
PCYKKSELHKFMPNNQLNYKSTQLSHLVYR

>NP_079515.2 programmed cell death 1 ligand 2 precursor [Homo sapiens]
MIFLLLMLSLELQLHQIAALFTVTVPKELYIIEHGSNVTLECNFDTGSHVNLGAITASLQKVENDTSPHR
ERATLLEEQLPLGKASFHIPQVQVRDEGQYQCIIIYGVAWDYKYLTLKVKASYRKINTHILKVPETDEVE
LTCQATGYPLAEVSWPNVSVPANTSHSRTPEGLYQVTSVLRLKPPPGRNFSCVFWNTHVRELTLASIDLQ
SQMEPRTHPTWLLHIFIPFCIIAFIFIATVIALRKQLCQKLYSSKDTTKRPVTTTKREVNSAI

>NP_001078826.1 B- and T-lymphocyte attenuator isoform 2 [Homo sapiens]
MKTLPAMLGTGKLFWVFFLIPYLDIWNIHGKESCDVQLYIKRQSEHSILAGDPFELECPVKYCANRPHVT
WCKLNGTTCVKLEDRQTSWKEEKNISFFILHFEPVLPNDNGSYRCSANFQSNLIESHSTTLYVTGKQNEL

SDTAGREINLVDAHLKSEQTEASTRQNSQVLLSETGIYDNDPDLCFRMQEGSEVYSNPCLEENKPGIVYA
SLNHSVIGPNSRLARNVKEAPTEYASICVRS

>NP_001001892.2 H-2 class I histocompatibility antigen, K-W28 alpha chain
isoform 1 precursor [Mus musculus]
MVPCTLLLLLAAALAPTQTRAGPHSLRYFVTAVSRPGLGEPRYMEVGYVDDTEFVRFDSDAENPRYEPRA
RWMEQEGPEYWERETQKAKGNEQSFRVDLRTLLGYYNQSKGGSHTIQVISGCEVGSDGRLLRGYQQYAYD
GCDYIALNEDLKTWTAADMAALITKHKWEQAGEAERLRAYLEGTCVEWLRRYLKNGNATLLRTDSPKAHV
THHSRPEDKVTLRCWALGFYPADITLTWQLNGEELIQDMELVETRPAGDGTFQKWASVVVPLGKEQYYTC
HVYHQGLPEPLTLRWEPPPSTVSNMATVAVLVVLGAAIVTGAVVAFVMKMRRRNTGGKGGDYALAPGSQT
SDLSLPDCKVMVHDPHSLA

>NP_034510.3 H-2 class I histocompatibility antigen, D-B alpha chain precursor
[Mus musculus]
MGAMAPRTLLLLLAAALAPTQTRAGPHSMRYFETAVSRPGLEEPRYISVGYVDNKEFVRFDSDAENPRYE
PRAPWMEQEGPEYWERETQKAKGQEQWFRVSLRNLLGYYNQSAGGSHTLQQMSGCDLGSDWRLLRGYLQF
AYEGRDYIALNEDLKTWTAADMAAQITRRKWEQSGAAEHYKAYLEGECVEWLHRYLKNGNATLLRTDSPK
AHVTHHPRSKGEVTLRCWALGFYPADITLTWQLNGEELTQDMELVETRPAGDGTFQKWASVVVPLGKEQN
YTCRVYHEGLPEPLTLRWEPPPSTDSYMVIVAVLGVLGAMAIIGAVVAFVMKRRRNTGGKGGDYALAPGS
QSSEMSLRDCKA

>NP_061199.2 natural killer cell receptor 2B4 precursor [Mus musculus]
MLGQAVLFTTFLLLRAHQGQDCPDSSEEVVGVSGKPVQLRPSNIQTKDVSVQWKKTEQGSHRKIEILNWY
NDGPSWSNVSFSDIYGFDYGDFALSIKSAKLQDSGHYLLEITNTGGKVCNKNFQLLILDHVETPNLKAQW
KPWTNGTCQLFLSCLVTKDDNVSYALYRGSTLISNQRNSTHWENQIDASSLHTYTCNVSNRASWANHTLN
FTHGCQSVPSNFRFLPFGVIIVILVTLFLGAIICFCVWTKKRKQLQFSPKEPLTIYEYVKDSRASRDQQG
CSRASGSPSAVQEDGRGQRELDRRVSEVLEQLPQQTFPGDRGTMYSMIQCKPSDSTSQEKCTVYSVVQPS
RKSGSKKRNQNSSLSCTVYEEVGNPWLKAHNPARLSRRELENFDVYS

>NP_001030178.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_002825.3 tyrosine-protein phosphatase non-receptor type 11 isoform 1 [Homo
sapiens]
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHF
RTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDCDIDV
PKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETLQRRIEEEQKSKRKGHEYTNIKYSLADQTSGDQSPL
PPCTPTPPCAEMREDSARVYENVGLMQQQKSFR

>NP_033973.2 cytotoxic T-lymphocyte protein 4 isoform 1 precursor [Mus musculus]
MACLGLRRYKAQLQLPSRTWPFVALLTLLFIPVFSEAIQVTQPSVVLASSHGVASFPCEYSPSHNTDEVR

VTVLRQTNDQMTEVCATTFTEKNTVGFLDYPFCSGTFNESRVNLTIQGLRAVDTGLYLCKVELMYPPPYF
VGMGNGTQIYVIDPEPCPDSDFLLWILVAVSLGLFFYSFLVTAVSLSKMLKKRSPLTTGVYVKMPPTEPE
CEKQFQPYFIPIN

>NP_058589.2 alpha-(1,6)-fucosyltransferase isoform 1 [Mus musculus]
MRAWTGSWRWIMLILFAWGTLLFYIGGHLVRDNDHPDHSSRELSKILAKLERLKQQNEDLRRMAESLRIP
EGPIDQGTATGRVRVLEEQLVKAKEQIENYKKQARNGLGKDHEILRRRIENGAKELWFFLQSELKKLKHL
EGNELQRHADEILLDLGHHERSIMTDLYYLSQTDGAGDWREKEAKDLTELVQRRITYLQNPKDCSKARKL
VCNINKGCGYGCQLHHVVYCFMIAYGTQRTLILESQNWRYATGGWETVFRPVSETCTDRSGLSTGHWSGE
VNDKNIQVVELPIVDSLHPRPPYLPLAVPEDLADRLLRVHGDPAVWWVSQFVKYLIRPQPWLEKEIEEAT
KKLGFKHPVIGVHVRRTDKVGTEAAFHPIEEYMVHVEEHFQLLARRMQVDKKRVYLATDDPTLLKEAKTK
YSNYEFISDNSISWSAGLHNRYTENSLRGVILDIHFLSQADFLVCTFSSQVCRVAYEIMQTLHPDASANF
HSLDDIYYFGGQNAHNQIAVYPHKPRTEEEIPMEPGDIIGVAGNHWDGYSKGINRKLGKTGLYPSYKVRE
KIETVKYPTYPEAEK

>NP_542168.1 tyrosine-protein phosphatase non-receptor type 11 isoform 2 [Homo
sapiens]
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHF
RTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCR

>NP_068693.1 programmed cell death 1 ligand 1 precursor [Mus musculus]
MRIFAGIIFTACCHLLRAFTITAPKDLYVVEYGSNVTMECRFPVERELDLLALVVYWEKEDEQVIQFVAG
EEDLKPQHSNFRGRASLPKDQLLKGNAALQITDVKLQDAGVYCCIISYGGADYKRITLKVNAPYRKINQR
ISVDPATSEHELICQAEGYPEAEVIWTNSDHQPVSGKRSVTTSRTEGMLLNVTSSLRVNATANDVFYCTF
WRSQPGQNHTAELIIPELPATHPPQNRTHWVLLGSILLFLIVVSTVLLFLRKQVRMLDVEKCGVEDTSSK
NRNDTQFEET

>NP_056605.1 ICOS ligand precursor [Mus musculus]
MQLKCPCFVSLGTRQPVWKKLHVSSGFFSGLGLFLLLLSSLCAASAETEVGAMVGSNVVLSCIDPHRRHF
NLSGLYVYWQIENPEVSVTYYLPYKSPGINVDSSYKNRGHLSLDSMKQGNFSLYLKNVTPQDTQEFTCRV
FMNTATELVKILEEVVRLRVAANFSTPVISTSDSSNPGQERTYTCMSKNGYPEPNLYWINTTDNSLIDTA
LQNNTVYLNKLGLYDVISTLRLPWTSRGDVLCCVENVALHQNITSISQAESFTGNNTKNPQETHNNELKV
LVPVLAVLAAAAFVSFIIYRRTRPHRSYTGPKTVQLELTDHA

>NP_001356492.1 60S ribosomal protein L17 isoform b [Homo sapiens]
MHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLD
VDSLVIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQ
KLMARE

>NP_001356489.1 60S ribosomal protein L17 isoform d [Homo sapiens]
MSYSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQWGWTQ
GRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMIL
TEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001356490.1 60S ribosomal protein L17 isoform d [Homo sapiens]
MSYSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQWGWTQ
GRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMIL
TEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001356487.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001356486.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001356491.1 60S ribosomal protein L17 isoform b [Homo sapiens]
MHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLD
VDSLVIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQ
KLMARE

>NP_001356484.1 60S ribosomal protein L17 isoform c [Homo sapiens]
MVRYSLDPENPTKCKWTGACKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNG
GVGRCAQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGR
INPYMSSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001356485.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001348018.1 F-box only protein 38 isoform 3 [Mus musculus]
MKVSSSQDHSRWMRLVDINLVRCHALKLDSFGQFVELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGV
SSALVSNQNSNNDNDNNAPNNNANLHDNNHHHPDDSDDDNDFRPDLQAGEAQFAADALNEMEDMVQEDGE
LVAESGNGMPAHNREVLPVDADEEQAGPSGLQRVVKPTPIADHDSESDDEEDSLELQEVWAPKNGTRRYS
EREEKTGDSGQSRETAAVSGKGKTPLRKRCNNSHQTGQAKPFPLEESSCEKGCQVTSEQIKADMKAARDV
SEKKKSKDVYPSCSSSSSSTAASTAGNASSPSTASQSPDFARTVTSSGSSEPSPPEVDVSRQCVCSPGGS
EDSEAMEEGDAESSVCPRCCCLRPQESQRRTGRCSDEERPSTSRACVVNGADGTRSAFSFRTLPQGGSSG
PAHDERTNGSGCGATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVPLISESEVAKTKPCHAMKR
KRTADKSTSTSDPVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENA
PIVNRFDYAQCKKLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPP
NVRNKVRIRNWMDTIANINQELIKYEFFLEATRTEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPW
LRSLRTAEPNSFARYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKRGIFQRVVAIFIHYCD
VNGEPVEDDYI

>NP_001348020.1 F-box only protein 38 isoform 3 [Mus musculus]
MKVSSSQDHSRWMRLVDINLVRCHALKLDSFGQFVELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGV
SSALVSNQNSNNDNDNNAPNNNANLHDNNHHHPDDSDDDNDFRPDLQAGEAQFAADALNEMEDMVQEDGE

LVAESGNGMPAHNREVLPVDADEEQAGPSGLQRVVKPTPIADHDSESDDEEDSLELQEVWAPKNGTRRYS
EREEKTGDSGQSRETAAVSGKGKTPLRKRCNNSHQTGQAKPFPLEESSCEKGCQVTSEQIKADMKAARDV
SEKKKSKDVYPSCSSSSSSTAASTAGNASSPSTASQSPDFARTVTSSGSSEPSPPEVDVSRQCVCSPGGS
EDSEAMEEGDAESSVCPRCCCLRPQESQRRTGRCSDEERPSTSRACVVNGADGTRSAFSFRTLPQGGSSG
PAHDERTNGSGCGATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVPLISESEVAKTKPCHAMKR
KRTADKSTSTSDPVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENA
PIVNRFDYAQCKKLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPP
NVRNKVRIRNWMDTIANINQELIKYEFFLEATRTEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPW
LRSLRTAEPNSFARYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKRGIFQRVVAIFIHYCD
VNGEPVEDDYI

>NP_001348019.1 F-box only protein 38 isoform 1 [Mus musculus]
MGPRKKSAKVCVMDSEVAEEMTADEEKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDSSFLTLLKKMPDVEQLYGLHPRYLERRRVRGQEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWMRLVDINLVRCHALKLDSFGQFVELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDNDNNAPNNNANLHDNNHHHPDDSDDDNDFRPDLQAGEAQFAADALNEMEDMVQEDGELVAESG
NGMPAHNREVLPVDADEEQAGPSGLQRVVKPTPIADHDSESDDEEDSLELQEVWAPKNGTRRYSEREEKT
GDSGQSRETAAVSGKGKTPLRKRCNNSHQTGQAKPFPLEESSCEKGCQVTSEQIKADMKAARDVSEKKKS
KDVYPSCSSSSSSTAASTAGNASSPSTASQSPDFARTVTSSGSSEPSPPEVDVSRQCVCSPGGSEDSEAM
EEGDAESSVCPRCCCLRPQESQRRTGRCSDEERPSTSRACVVNGADGTRSAFSFRTLPQGGSSGPAHDER
TNGSGCGATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVPLISESEVAKTKPCHAMKRKRTADK
STSTSDPVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRF
DYAQCKKLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKV
RIRNWMDTIANINQELIKYEFFLEATRTEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRT
AEPNSFARYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKRGIFQRVVAIFIHYCDVNGEPV
EDDYI

>NP_001348017.1 F-box only protein 38 isoform 2 [Mus musculus]
MGPRKKSAKVCVMDSEVAEEMTADEEKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDSSFLTLLKKMPDVEQLYGLHPRYLERRRVRGQEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWMRLVDINLVRCHALKLDSFGQFVELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDNDNNAPNNNANLHDNNHHHPDDSDDDNDFRPDLQAGEAQFAADALNEMEDMVQEDGELVAESG
NGMPAHNREVLPVDADEEQAGPSGLQRVVKPTPIADHDSESDDEEDSLELQEVWAPKNGTRRYSEREEKT
GDSGQSRETAVSGKGKTPLRKRCNNSHQTGQAKPFPLEESSCEKGCQVTSEQIKADMKAARDVSEKKKSK
DVYPSCSSSSSSTAASTAGNASSPSTASQSPDFARTVTSSGSSEPSPPEVDVSRQCVCSPGGSEDSEAME
EGDAESSVCPRCCCLRPQESQRRTGRCSDEERPSTSRACVVNGADEVAKTKPCHAMKRKRTADKSTSTSD
PVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRFDYAQCK
KLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKVRIRNWM
DTIANINQELIKYEFFLEATRTEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRTAEPNSF
ARYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKRGIFQRVVAIFIHYCDVNGEPVEDDYI

>NP_001343496.1 lysine-specific histone demethylase 1A isoform 3 [Mus musculus]
MLSGKKAAAAAAAAAAAAAAGTEAGSGAAGGAENGSEVAAPPAGLTGPTDMATGAAGERTPRKKEPPRAS
PPGGLAEPPGSAGPQAGPTAGPGSATPMETGIAETPEGRRTSRRKRAKVEYREMDESLANLSEDEYYSEE
ERNAKAEKEKKLPPPPPQAPPEEENESEPEEPSGVEGAAFQSRLPHDRMTSQEAACFPDIISGPQQTQKV
FLFIRNRTLQLWLDNPKIQLTFEATLQQLEAPYNSDTVLVHRVHSYLERHGLINFGIYKRIKPLPIKKTG
KVIIIGSGVSGLAAARQLQSFGMDVTLLEARDRVGGRVATFRKGNYVADLGAMVVTGLGGNPMAVVSKQV
NMELAKIKQKCPLYEANGQADTVKVPKEKDEMVEQEFNRLLEATSYLSHQLDFNVLNNKPVSLGQALEVV
IQLQEKHVKDEQIEHWKKIVKTQEELKELLNKMVNLKEKIKELHQQYKEASEVKPPRDITAEFLVKSKHR
DLTALCKEYDELAETQGKLEEKLQELEANPPSDVYLSSRDRQILDWHFANLEFANATPLSTLSLKHWDQD
DDFEFTGSHLTVRNGYSCVPVALAEGLDIKLNTAVRQVRYTASGCEVIAVNTRSTSQTFIYKCDAVLCTL
PLGVLKQQPPAVQFVPPLPEWKTSAVQRMGFGNLNKVVLCFDRVFWDPSVNLFGHVGSTTASRGELFLFW
NLYKAPILLALVAGEAAGIMENISDDVIVGRCLAILKGIFGSSAVPQPKETVVSRWRADPWARGSYSYVA
AGSSGNDYDLMAQPITPGPSIPGAPQPIPRLFFAGEHTIRNYPATVHGALLSGLREAGRIADQFLGAMYT
LPRQATPGVPAQQSPSM

>NP_001338025.1 interleukin-15 receptor subunit alpha isoform 6 [Homo sapiens]
MSVEHADIWVKSYSLYSRERYICNSGFKRKAGTSSLTECVLNKATNVAHWTTPSLKCIRDPALVHQRPAP
PSTVTTAGVTPQPESLSPSGKEPAASSPSSNNTAATTAAIVPGSQLMPSKSPSTGTTEISSHESSHGTPS
QTTAKNWELTASASHQPPGVYPQGHSDTTVAISTSTVLLCGLSAVSLLACYLKSRASVCSCHPRSAGHTC
SVGSVC

>NP_001272912.1 protein BANP isoform 4 [Mus musculus]
MMSEQDLADVVQIAVEDLSPDHPVVLENHVVTDDDEPALKRQRLEINCQDPSIKSFLYSINQTICLRLDS
IEAKLQALEATCKSLEEKLDLVTNKQHSPIQVPMVAGSPLGATQTCNKVRCAVPGRRQNTIVVKVPGQDD
SHNEDGESGSEASDSVSNCGQPGSQNIGSNVTLITLNSEEDYPNGTWLGDENNPEMRVRCAIIPSDMLHI
STNCRTAEKMALTLLDYLFHREVQAVSNLSGQGKHGKKQLDPLTIYGIRCHLFYKFGITESDWYRIKQSI
DSKCRTAWRRKQRGQSLAVKSFSRRTPSSSSYSASETMMGTPPPTSELQQSQPQALHYALANAQQVQIHQ
IGEDGQVQVGHLHIAQVPQGEQVQITQDSEGNLQIHHVGQDGQSWGLCQNPIPVSGDSVAQANPSQLWPL
GGDTLDLPAGNEMIQVLQGAQLIAVASSDPAATGVDGSPLQGSDIQVQYVQLAPVSDHTAAAQTAEALQP
TLQPDMQLEHGAIQIQ

>NP_001272910.1 protein BANP isoform 3 [Mus musculus]
MMSEQDLADVVQIAVEDLSPDHPVVLENHVVTDDDEPALKRQRLEINCQDPSIKSFLYSINQTICLRLDS
IEAKLQALEATCKSLEEKLDLVTNKQHSPIQVPMVAGSPLGATQTCNKVRCAVPGRRQNTIVVKVPGQDD
SHNEDGESGSEASDSVSNCGQPGSQNIGSNVTLITLNSEEDYPNGTWLGDENNPEMRVRCAIIPSDMLHI
STNCRTAEKMALTLLDYLFHREVQAVSNLSGQGKHGKKQLDPLTIYGIRCHLFYKFGITESDWYRIKQSI
DSKCRTAWRRKQRGQSLAVKSFSRRTPSSSSYSASETMMGTPPPTSELQQSQPQALHYALANAQQVQIHQ
IGEDGQVQVIPQGHLHIAQVPQGEQVQITQDSEGNLQIHHVGQDGQSWGLCQNPIPVSGDSVAQANPSQL
WPLGGDTLDLPAGNEMIQVLQGAQLIAVASSDPAATGVDGSPLQGSDIQVQYVQLAPVSDHTAAAQTAEA
LQPTLQPDMQLEHGAIQIQ

>NP_001269100.1 killer cell immunoglobulin-like receptor 3DS1 isoform 3 [Homo
sapiens]
MLLMVVSMACVGNHRKPSLLAHPGPLVKSGERVILQCWSDIMFEHFFLHKEWISKDPSRLVGQIHDGVSK
ANFSIGSMMRALAGTYRCYGSVTHTPYQLSAPSDPLDIVVTGLYEKPSLSAQPGPKVQAGESVTLSCSSR
SSYDMYHLSREGGAHERRLPAVRKVNRTFQADFPLGPATHGGTYRCFGSFRHSPYEWSDPSDPLLVSVTG
NPSSSWPSPTEPSSKSGNLRHLHILIGTSVVKIPFTILLFFLLHRWCSNKKKCCCNGPRACREQK

>NP_001269099.1 killer cell immunoglobulin-like receptor 3DS1 isoform 2 precursor [Homo sapiens]
MLLMVVSMACVGLFLVQRAGPHMGNHRKPSLLAHPGPLVKSGERVILQCWSDIMFEHFFLHKEWISKDPS
RLVGQIHDGVSKANFSIGSMMRALAGTYRCYGSVTHTPYQLSAPSDPLDIVVTGLYEKPSLSAQPGPKVQ
AGESVTLSCSSRSSYDMYHLSREGGAHERRLPAVRKVNRTFQADFPLGPATHGGTYRCFGSFRHSPYEWS
DPSDPLLVSVTGNPSSSWPSPTEPSSKSGNLRHLHILIGTSVVKIPFTILLFFLLHRWCSNKKKCCCNGP
RACREQK

>NP_001243694.1 interleukin-15 receptor subunit alpha isoform 4 [Homo sapiens]
MRLAGRQVPEQRSPPPPGLGSARPGSPAVSCGAAAMAPRRARGCRTLGLPALLLLLLLRPPATRDARDRL
AVLAGRSRISESFNHEVQTHEACVRLRTMENCPQCHHHRTSRQQAGITCPPPMSVEHADIWVKSYSLYSR
ERYICNSGFKRKAGTSSLTECVLNKATNVAHWTTPSLKCIRDPALVHQRPAPPSTVTTAGVTPQPESLSP
SGKEPAASSPSSNNTAATTAAIVPGSQLMPSKSPSTGTTEISSHESSHGTPSQTTAKNWELTASASHQPP
GVYPQGHSDTTVAISTSTVLLCGLSAVSLLACYLKSRQTPPLASVEMEAMEALPVTWGTSSRDEDLENCS
HHL

>NP_001186285.1 RPL17-C18orf32 protein isoform 2 [Homo sapiens]
MHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLD
VDSLVIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMILTEKEQIVPKPEEEVAQKKKLRSSSLGKW
CAFLVSSFQFCSGSTKNSWSHIYTLWFPPSLVVYGLRKQYKNPMIQTKAK

>NP_001186284.1 RPL17-C18orf32 protein isoform 1 [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKLRSSSLGKWCAFLVSSFQFCSGSTKNSWSHIYTLWFPPSLV
VYGLRKQYKNPMIQTKAK

>NP_001186274.1 60S ribosomal protein L17 isoform b [Homo sapiens]
MHIRKATKYLKDVTLQKQCVPFRRYNGGVGRCAQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLD
VDSLVIEHIQVNKAPKMRRRTYRAHGRINPYMSSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQ
KLMARE

>NP_001186269.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>sp|Q7Z6A9.3|BTLA_HUMAN RecName: Full=B- and T-lymphocyte attenuator; AltName: Full=B- and T-lymphocyte-associated protein; AltName: CD_antigen=CD272; Flags: Precursor
MKTLPAMLGTGKLFWVFFLIPYLDIWNIHGKESCDVQLYIKRQSEHSILAGDPFELECPVKYCANRPHVT
WCKLNGTTCVKLEDRQTSWKEEKNISFFILHFEPVLPNDNGSYRCSANFQSNLIESHSTTLYVTDVKSAS
ERPSKDEMASRPWLLYRLLPLGGLPLLITTCFCLFCCLRRHQGKQNELSDTAGREINLVDAHLKSEQTEA
STRQNSQVLLSETGIYDNDPDLCFRMQEGSEVYSNPCLEENKPGIVYASLNHSVIGPNSRLARNVKEAPT
EYASICVRS

>NP_001171370.1 src kinase-associated phosphoprotein 1 isoform 3 [Mus musculus]

MQAVALPEEICWLLEDTEDFLAEGLQNENLSPGAQDQRAHILRGFQQIKSRYCWDFQPQGGDLGQDGSDD
NLSGTHGPPLTSEASFWSDYQDEGIEDILRGAQELDSVIKQGYLEKKSKDHSFFGSEWQKRWCVISRGLF
LYYANEKSKQPKGTFLIKGYSVRMAPHLRKDSKKESCFELISQDRRSYEFTASSPAEARDWVDQISFLLK
DLSSLTIPFEEEEEEEEEEEKEEEEMYNDVDGFDSPRSGSQCRAMALPEPTEKEEDIYEVLPVDYADYYQ
GLWDCHGDQPDELSFQRGDLIRILSKEYNMYGWWVGELNSVIGIVPKDYLTTAFEMEGI

>NP_001171369.1 src kinase-associated phosphoprotein 1 isoform 2 [Mus musculus]
MQAVALPEEICWLLEDTEDFLAEGLQNENLSPGAQDQRAHILRGFQQIKSRYCWDFQPQGGDLGQDGSDD
NLSGTHGPPLTSEASFWSDYQDEGIEDILRGAQELDSVIKQGYLEKKSKDHSFFGSEWQKRWCVISRGLF
LYYANEKSKQPKGTFLIKGYSVRMAPHLRKDSKKESCFELISQDRRSYEFTASSPAEARDWVDQISFLLK
DLSSLTIPFEEEEEEEEEEEKEEEEMYNDVDGFDSPRSGSQCRAMALPEPTEKEEDIYEVLPVDYADYYQ
GLWDCHGDQPDELSFQRGDLIRILSKGTYSQTIRNSRPLLWPWILLFPEWSQDSAASCDFKPLIR

>NP_001157954.1 signal-induced proliferation-associated protein 1 [Mus musculus]
MWAGGVGSPRRGMAPAPTDDLFARKLRQPARPPLTPHTFEPRPARGPLLRSGSDAGEVRPPTPASPRARA
HSHEDASRPAATPTRLFTDPLALLGLPAEEPEPTFPPVLEPRWFAHYDVQSLLFDWAPRPRGTGSHIEAN
SGTLAEGQTTTSDLLLGAPGFVSELGGEGELGLGGPISPPVPPALPNAAVSVLEEPQTRTTAYSLEHADL
GAGYYRKYFYGKEHQNFFGLDEALGPVAVSLRREEKEGSGGGTLHSYRVIVRTTQLRTLRGTISEDALPP
GPPRGLSPRKLLEHVAPRLSPTCLRLGSASPKVPRTLLTLDEQVLSFQRKVGILYCRAGQGSEEEMYNNQ
EAGAAFMQFLTLLGDVVRLKGFESYRAQLDTKTDSTGTHSLYTTYQDHEIMFHVSTMLPYTPNNQQQLLR
KRHIGNDIVTIVFQEPGSKPFCPTTIRSHFQHVFLVVRAHAPCTPHTSYRVAVSRTQDTPAFGPALPEGG
GPFAANADFRAFLLAKALNGEQAAGHARQFHAMATRTRQQYLQDLATNEVTTTSLDSASRFGLPSLGGRR
RATPRSPGAELQAAGALMWGVRAAPGARVAAGAETSGPEDAEVPCLLGISAETLVLVAPRDGRVVFNCAC
RDVLAWTFSEHQLDLYHGRGEAITLRLDGAPGQAVGEVVARLQLVSRGCETRELALPRDGQGRLGFEVDA
EGFITHVERFTFAETTGLRPGARLLRVCGQTLPKLGPEAAAQMLRSAPKVCVTVLPPDESGRPRRSFSEL
YMLSLKEPSRRGGPEPVQDETGKLVILPPTKQLLHFCLKDSSSPPGPGDLTEERTEFLRSHNSLSSGSSL
SDEAPVLPNTTPDLLLVTTANPSAPGTDRETPPSQDQSGSPSSHEDTSDSGPELRASILPRTLSLRNSIS
KIMSEAGSETLEDEWQSISEIASTCNTILESLSREGQPISESGDPKEALKCDSEPEPGSLSEKVSHLESM
LWKLQEDLQREKADRAALEEEVRSLRHNNQRLLAESESAATRLLLASKHLGAPTTDLA

>NP_001157953.1 signal-induced proliferation-associated protein 1 [Mus musculus]
MWAGGVGSPRRGMAPAPTDDLFARKLRQPARPPLTPHTFEPRPARGPLLRSGSDAGEVRPPTPASPRARA
HSHEDASRPAATPTRLFTDPLALLGLPAEEPEPTFPPVLEPRWFAHYDVQSLLFDWAPRPRGTGSHIEAN
SGTLAEGQTTTSDLLLGAPGFVSELGGEGELGLGGPISPPVPPALPNAAVSVLEEPQTRTTAYSLEHADL
GAGYYRKYFYGKEHQNFFGLDEALGPVAVSLRREEKEGSGGGTLHSYRVIVRTTQLRTLRGTISEDALPP
GPPRGLSPRKLLEHVAPRLSPTCLRLGSASPKVPRTLLTLDEQVLSFQRKVGILYCRAGQGSEEEMYNNQ
EAGAAFMQFLTLLGDVVRLKGFESYRAQLDTKTDSTGTHSLYTTYQDHEIMFHVSTMLPYTPNNQQQLLR
KRHIGNDIVTIVFQEPGSKPFCPTTIRSHFQHVFLVVRAHAPCTPHTSYRVAVSRTQDTPAFGPALPEGG
GPFAANADFRAFLLAKALNGEQAAGHARQFHAMATRTRQQYLQDLATNEVTTTSLDSASRFGLPSLGGRR
RATPRSPGAELQAAGALMWGVRAAPGARVAAGAETSGPEDAEVPCLLGISAETLVLVAPRDGRVVFNCAC
RDVLAWTFSEHQLDLYHGRGEAITLRLDGAPGQAVGEVVARLQLVSRGCETRELALPRDGQGRLGFEVDA
EGFITHVERFTFAETTGLRPGARLLRVCGQTLPKLGPEAAAQMLRSAPKVCVTVLPPDESGRPRRSFSEL
YMLSLKEPSRRGGPEPVQDETGKLVILPPTKQLLHFCLKDSSSPPGPGDLTEERTEFLRSHNSLSSGSSL
SDEAPVLPNTTPDLLLVTTANPSAPGTDRETPPSQDQSGSPSSHEDTSDSGPELRASILPRTLSLRNSIS
KIMSEAGSETLEDEWQSISEIASTCNTILESLSREGQPISESGDPKEALKCDSEPEPGSLSEKVSHLESM
LWKLQEDLQREKADRAALEEEVRSLRHNNQRLLAESESAATRLLLASKHLGAPTTDLA

>NP_001157952.1 signal-induced proliferation-associated protein 1 [Mus musculus]

MWAGGVGSPRRGMAPAPTDDLFARKLRQPARPPLTPHTFEPRPARGPLLRSGSDAGEVRPPTPASPRARA
HSHEDASRPAATPTRLFTDPLALLGLPAEEPEPTFPPVLEPRWFAHYDVQSLLFDWAPRPRGTGSHIEAN
SGTLAEGQTTTSDLLLGAPGFVSELGGEGELGLGGPISPPVPPALPNAAVSVLEEPQTRTTAYSLEHADL
GAGYYRKYFYGKEHQNFFGLDEALGPVAVSLRREEKEGSGGGTLHSYRVIVRTTQLRTLRGTISEDALPP
GPPRGLSPRKLLEHVAPRLSPTCLRLGSASPKVPRTLLTLDEQVLSFQRKVGILYCRAGQGSEEEMYNNQ
EAGAAFMQFLTLLGDVVRLKGFESYRAQLDTKTDSTGTHSLYTTYQDHEIMFHVSTMLPYTPNNQQQLLR
KRHIGNDIVTIVFQEPGSKPFCPTTIRSHFQHVFLVVRAHAPCTPHTSYRVAVSRTQDTPAFGPALPEGG
GPFAANADFRAFLLAKALNGEQAAGHARQFHAMATRTRQQYLQDLATNEVTTTSLDSASRFGLPSLGGRR
RATPRSPGAELQAAGALMWGVRAAPGARVAAGAETSGPEDAEVPCLLGISAETLVLVAPRDGRVVFNCAC
RDVLAWTFSEHQLDLYHGRGEAITLRLDGAPGQAVGEVVARLQLVSRGCETRELALPRDGQGRLGFEVDA
EGFITHVERFTFAETTGLRPGARLLRVCGQTLPKLGPEAAAQMLRSAPKVCVTVLPPDESGRPRRSFSEL
YMLSLKEPSRRGGPEPVQDETGKLVILPPTKQLLHFCLKDSSSPPGPGDLTEERTEFLRSHNSLSSGSSL
SDEAPVLPNTTPDLLLVTTANPSAPGTDRETPPSQDQSGSPSSHEDTSDSGPELRASILPRTLSLRNSIS
KIMSEAGSETLEDEWQSISEIASTCNTILESLSREGQPISESGDPKEALKCDSEPEPGSLSEKVSHLESM
LWKLQEDLQREKADRAALEEEVRSLRHNNQRLLAESESAATRLLLASKHLGAPTTDLA

>NP_035509.4 signal-induced proliferation-associated protein 1 [Mus musculus]
MWAGGVGSPRRGMAPAPTDDLFARKLRQPARPPLTPHTFEPRPARGPLLRSGSDAGEVRPPTPASPRARA
HSHEDASRPAATPTRLFTDPLALLGLPAEEPEPTFPPVLEPRWFAHYDVQSLLFDWAPRPRGTGSHIEAN
SGTLAEGQTTTSDLLLGAPGFVSELGGEGELGLGGPISPPVPPALPNAAVSVLEEPQTRTTAYSLEHADL
GAGYYRKYFYGKEHQNFFGLDEALGPVAVSLRREEKEGSGGGTLHSYRVIVRTTQLRTLRGTISEDALPP
GPPRGLSPRKLLEHVAPRLSPTCLRLGSASPKVPRTLLTLDEQVLSFQRKVGILYCRAGQGSEEEMYNNQ
EAGAAFMQFLTLLGDVVRLKGFESYRAQLDTKTDSTGTHSLYTTYQDHEIMFHVSTMLPYTPNNQQQLLR
KRHIGNDIVTIVFQEPGSKPFCPTTIRSHFQHVFLVVRAHAPCTPHTSYRVAVSRTQDTPAFGPALPEGG
GPFAANADFRAFLLAKALNGEQAAGHARQFHAMATRTRQQYLQDLATNEVTTTSLDSASRFGLPSLGGRR
RATPRSPGAELQAAGALMWGVRAAPGARVAAGAETSGPEDAEVPCLLGISAETLVLVAPRDGRVVFNCAC
RDVLAWTFSEHQLDLYHGRGEAITLRLDGAPGQAVGEVVARLQLVSRGCETRELALPRDGQGRLGFEVDA
EGFITHVERFTFAETTGLRPGARLLRVCGQTLPKLGPEAAAQMLRSAPKVCVTVLPPDESGRPRRSFSEL
YMLSLKEPSRRGGPEPVQDETGKLVILPPTKQLLHFCLKDSSSPPGPGDLTEERTEFLRSHNSLSSGSSL
SDEAPVLPNTTPDLLLVTTANPSAPGTDRETPPSQDQSGSPSSHEDTSDSGPELRASILPRTLSLRNSIS
KIMSEAGSETLEDEWQSISEIASTCNTILESLSREGQPISESGDPKEALKCDSEPEPGSLSEKVSHLESM
LWKLQEDLQREKADRAALEEEVRSLRHNNQRLLAESESAATRLLLASKHLGAPTTDLA

>NP_001158040.1 signal-induced proliferation-associated protein 1 [Mus musculus]
MWAGGVGSPRRGMAPAPTDDLFARKLRQPARPPLTPHTFEPRPARGPLLRSGSDAGEVRPPTPASPRARA
HSHEDASRPAATPTRLFTDPLALLGLPAEEPEPTFPPVLEPRWFAHYDVQSLLFDWAPRPRGTGSHIEAN
SGTLAEGQTTTSDLLLGAPGFVSELGGEGELGLGGPISPPVPPALPNAAVSVLEEPQTRTTAYSLEHADL
GAGYYRKYFYGKEHQNFFGLDEALGPVAVSLRREEKEGSGGGTLHSYRVIVRTTQLRTLRGTISEDALPP
GPPRGLSPRKLLEHVAPRLSPTCLRLGSASPKVPRTLLTLDEQVLSFQRKVGILYCRAGQGSEEEMYNNQ
EAGAAFMQFLTLLGDVVRLKGFESYRAQLDTKTDSTGTHSLYTTYQDHEIMFHVSTMLPYTPNNQQQLLR
KRHIGNDIVTIVFQEPGSKPFCPTTIRSHFQHVFLVVRAHAPCTPHTSYRVAVSRTQDTPAFGPALPEGG
GPFAANADFRAFLLAKALNGEQAAGHARQFHAMATRTRQQYLQDLATNEVTTTSLDSASRFGLPSLGGRR
RATPRSPGAELQAAGALMWGVRAAPGARVAAGAETSGPEDAEVPCLLGISAETLVLVAPRDGRVVFNCAC
RDVLAWTFSEHQLDLYHGRGEAITLRLDGAPGQAVGEVVARLQLVSRGCETRELALPRDGQGRLGFEVDA
EGFITHVERFTFAETTGLRPGARLLRVCGQTLPKLGPEAAAQMLRSAPKVCVTVLPPDESGRPRRSFSEL
YMLSLKEPSRRGGPEPVQDETGKLVILPPTKQLLHFCLKDSSSPPGPGDLTEERTEFLRSHNSLSSGSSL
SDEAPVLPNTTPDLLLVTTANPSAPGTDRETPPSQDQSGSPSSHEDTSDSGPELRASILPRTLSLRNSIS
KIMSEAGSETLEDEWQSISEIASTCNTILESLSREGQPISESGDPKEALKCDSEPEPGSLSEKVSHLESM

LWKLQEDLQREKADRAALEEEVRSLRHNNQRLLAESESAATRLLLASKHLGAPTTDLA

>NP_598633.2 lysine-specific histone demethylase 1A isoform 2 [Mus musculus]
MLSGKKAAAAAAAAAAAAAAGTEAGSGAAGGAENGSEVAAPPAGLTGPTDMATGAAGERTPRKKEPPRAS
PPGGLAEPPGSAGPQAGPTAGPGSATPMETGIAETPEGRRTSRRKRAKVEYREMDESLANLSEDEYYSEE
ERNAKAEKEKKLPPPPPQAPPEEENESEPEEPSGVEGAAFQSRLPHDRMTSQEAACFPDIISGPQQTQKV
FLFIRNRTLQLWLDNPKIQLTFEATLQQLEAPYNSDTVLVHRVHSYLERHGLINFGIYKRIKPLPIKKTG
KVIIIGSGVSGLAAARQLQSFGMDVTLLEARDRVGGRVATFRKGNYVADLGAMVVTGLGGNPMAVVSKQV
NMELAKIKQKCPLYEANGQAVPKEKDEMVEQEFNRLLEATSYLSHQLDFNVLNNKPVSLGQALEVVIQLQ
EKHVKDEQIEHWKKIVKTQEELKELLNKMVNLKEKIKELHQQYKEASEVKPPRDITAEFLVKSKHRDLTA
LCKEYDELAETQGKLEEKLQELEANPPSDVYLSSRDRQILDWHFANLEFANATPLSTLSLKHWDQDDDFE
FTGSHLTVRNGYSCVPVALAEGLDIKLNTAVRQVRYTASGCEVIAVNTRSTSQTFIYKCDAVLCTLPLGV
LKQQPPAVQFVPPLPEWKTSAVQRMGFGNLNKVVLCFDRVFWDPSVNLFGHVGSTTASRGELFLFWNLYK
APILLALVAGEAAGIMENISDDVIVGRCLAILKGIFGSSAVPQPKETVVSRWRADPWARGSYSYVAAGSS
GNDYDLMAQPITPGPSIPGAPQPIPRLFFAGEHTIRNYPATVHGALLSGLREAGRIADQFLGAMYTLPRQ
ATPGVPAQQSPSM

>NP_598897.2 F-box only protein 38 isoform 4 [Mus musculus]
MGPRKKSAKVCVMDSEVAEEMTADEEKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDSSFLTLLKKMPDVEQLYGLHPRYLERRRVRGQEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWMRLVDINLVRCHALKLDSFGQFVELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDNDNNAPNNNANLHDNNHHHPDDSDDDNDFRPDLQAGEAQFAADALNEMEDMVQEDGELVAESG
NGMPAHNREVLPVDADEEQAGPSGLQRVVKPTPIADHDSESDDEEDSLELQEVWAPKNGTRRYSEREEKT
GDSGQSRETAVSGKGKTPLRKRCNNSHQTGQAKPFPLEESSCEKGCQVTSEQIKADMKAARDVSEKKKSK
DVYPSCSSSSSSTAASTAGNASSPSTASQSPDFARTVTSSGSSEPSPPEVDVSRQCVCSPGGSEDSEAME
EGDAESSVCPRCCCLRPQESQRRTGRCSDEERPSTSRACVVNGADGTRSAFSFRTLPQGGSSGPAHDERT
NGSGCGATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVPLISESEVAKTKPCHAMKRKRTADKS
TSTSDPVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRFD
YAQCKKLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKVR
IRNWMDTIANINQELIKYEFFLEATRTEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRTA
EPNSFARYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKRGIFQRVVAIFIHYCDVNGEPVE
DDYI

>sp|Q15116.3|PDCD1_HUMAN RecName: Full=Programmed cell death protein 1;
Short=Protein PD-1; Short=hPD-1; AltName: CD_antigen=CD279; Flags: Precursor
MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRM
SPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLK
EDPSAVPVFSVDYGELDFQWREKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPE
DGHCSWPL

>NP_001077008.1 killer cell immunoglobulin-like receptor 3DS1 isoform 1
precursor [Homo sapiens]
MLLMVVSMACVGLFLVQRAGPHMGGQDKPFLSAWPSAVVPRGGHVTLRCHYRHRFNNFMLYKEDRIHVPI

FHGRIFQEGFNMSPVTTAHAGNYTCRGSHPHSPTGWSAPSNPMVIMVTGNHRKPSLLAHPGPLVKSGERV
ILQCWSDIMFEHFFLHKEWISKDPSRLVGQIHDGVSKANFSIGSMMRALAGTYRCYGSVTHTPYQLSAPS
DPLDIVVTGLYEKPSLSAQPGPKVQAGESVTLSCSSRSSYDMYHLSREGGAHERRLPAVRKVNRTFQADF
PLGPATHGGTYRCFGSFRHSPYEWSDPSDPLLVSVTGNPSSSWPSPTEPSSKSGNLRHLHILIGTSVVKI
PFTILLFFLLHRWCSNKKKCCCNGPRACREQK

>NP_058092.2 protein BANP isoform 2 [Mus musculus]
MMSEQDLADVVQIAVEDLSPDHPVVLENHVVTDDDEPALKRQRLEINCQDPSIKSFLYSINQTICLRLDS
IEAKLQALEATCKSLEEKLDLVTNKQHSPIQVPMVAGSPLGATQTCNKVRCVVPQTTVILNNDRQNAIVA
KMEDPLSNRAPDSLENIISNAVPGRRQNTIVVKVPGQDDSHNEDGESGSEASDSVSNCGQPGSQNIGSNV
TLITLNSEEDYPNGTWLGDENNPEMRVRCAIIPSDMLHISTNCRTAEKMALTLLDYLFHREVQAVSNLSG
QGKHGKKQLDPLTIYGIRCHLFYKFGITESDWYRIKQSIDSKCRTAWRRKQRGQSLAVKSFSRRTPSSSS
YSASETMMGTPPPTSELQQSQPQALHYALANAQQVQIHQIGEDGQVQVIPQGHLHIAQVPQGEQVQITQD
SEGNLQIHHVGQDGQSWGLCQNPIPVSGDSVAQANPSQLWPLGGDTLDLPAGNEMIQVLQGAQLIAVASS
DPAATGVDGSPLQGSDIQVQYVQLAPVSDHTAAAQTAEALQPTLQPDMQLEHGAIQIQ

>NP_001036029.1 CD27 antigen isoform b precursor [Mus musculus]
MAWPPPYWLCMLGTLVGLSATLAPNSCPDKHYWTGGGLCCRMCEPEKPSWPLHRQLPNSTVYSQRSSHRP
LCSSDCIRIFVTFSSMFLIFVLGAILFFHQRRNHGPNEDRQAVPEEPCPYSCPREEEGSAIPIQEDYRKP
EPAFYP

>NP_001028358.1 src kinase-associated phosphoprotein 1 isoform 1 [Mus musculus]
MQAVALPEEICWLLEDTEDFLAEGLQNENLSPGAQDQRAHILRGFQQIKSRYCWDFQPQGGDLGQDGSDD
NLSGTHGPPLTSEASFWSDYQDEGIEDILRGAQELDSVIKQGYLEKKSKDHSFFGSEWQKRWCVISRGLF
LYYANEKSKQPKGTFLIKGYSVRMAPHLRKDSKKESCFELISQDRRSYEFTASSPAEARDWVDQISFLLK
DLSSLTIPFEEEEEEEEEEKEEEEMYNDVDGFDSPRSGSQCRAMALPEPTEKEEDIYEVLPDDDDLEED
TCGAHRRRVDYADYYQGLWDCHGDQPDELSFQRGDLIRILSKEYNMYGWWVGELNSVIGIVPKDYLTTAF
EMEGI

>sp|Q9EP73.1|PD1L1_MOUSE RecName: Full=Programmed cell death 1 ligand 1;
Short=PD-L1; Short=PDCD1 ligand 1; Short=Programmed death ligand 1; AltName:
Full=B7 homolog 1; Short=B7-H1; AltName: CD_antigen=CD274; Flags: Precursor
MRIFAGIIFTACCHLLRAFTITAPKDLYVVEYGSNVTMECRFPVERELDLLALVVYWEKEDEQVIQFVAG
EEDLKPQHSNFRGRASLPKDQLLKGNAALQITDVKLQDAGVYCCIISYGGADYKRITLKVNAPYRKINQR
ISVDPATSEHELICQAEGYPEAEVIWTNSDHQPVSGKRSVTTSRTEGMLLNVTSSLRVNATANDVFYCTF
WRSQPGQNHTAELIIPELPATHPPQNRTHWVLLGSILLFLIVVSTVLLFLRKQVRMLDVEKCGVEDTSSK
NRNDTQFEET

>sp|Q9NZQ7.1|PD1L1_HUMAN RecName: Full=Programmed cell death 1 ligand 1;
Short=PD-L1; Short=PDCD1 ligand 1; Short=Programmed death ligand 1;
Short=hPD-L1; AltName: Full=B7 homolog 1; Short=B7-H1; AltName:
CD_antigen=CD274; Flags: Precursor
MRIFAVFIFMTYWHLLNAFTVTVPKDLYVVEYGSNMTIECKFPVEKQLDLAALIVYWEMEDKNIIQFVHG
EEDLKVQHSSYRQRARLLKDQLSLGNAALQITDVKLQDAGVYRCMISYGGADYKRITVKVNAPYNKINQR
ILVVDPVTSEHELTCQAEGYPKAEVIWTSSDHQVLSGKTTTTNSKREEKLFNVTSTLRINTTTNEIFYCT
FRRLDPEENHTAELVIPELPLAHPPNERTHLVILGAILLCLGVALTFIFRLRKGRMMDVKKCGIQDTNSK
KQSDTHLEET

>sp|Q9BQ51.2|PD1L2_HUMAN RecName: Full=Programmed cell death 1 ligand 2; Short=PD-1 ligand 2; Short=PD-L2; Short=PDCD1 ligand 2; Short=Programmed death ligand 2; AltName: Full=Butyrophilin B7-DC; Short=B7-DC; AltName: CD_antigen=CD273; Flags: Precursor
MIFLLLMLSLELQLHQIAALFTVTVPKELYIIEHGSNVTLECNFDTGSHVNLGAITASLQKVENDTSPHR
ERATLLEEQLPLGKASFHIPQVQVRDEGQYQCIIIYGVAWDYKYLTLKVKASYRKINTHILKVPETDEVE
LTCQATGYPLAEVSWPNVSVPANTSHSRTPEGLYQVTSVLRLKPPPGRNFSCVFWNTHVRELTLASIDLQ
SQMEPRTHPTWLLHIFIPFCIIAFIFIATVIALRKQLCQKLYSSKDTTKRPVTTTKREVNSAI

>sp|Q9WUL5.1|PD1L2_MOUSE RecName: Full=Programmed cell death 1 ligand 2; Short=PD-1 ligand 2; Short=PD-L2; Short=PDCD1 ligand 2; Short=Programmed death ligand 2; AltName: Full=Butyrophilin B7-DC; Short=B7-DC; AltName: CD_antigen=CD273; Flags: Precursor
MLLLLPILNLSLQLHPVAALFTVTAPKEVYTVDVGSSVSLECDFDRRECTELEGIRASLQKVENDTSLQS
ERATLLEEQLPLGKALFHIPSVQVRDSGQYRCLVICGAAWDYKYLTVKVKASYMRIDTRILEVPGTGEVQ
LTCQARGYPLAEVSWQNVSVPANTSHIRTPEGLYQVTSVLRLKPQPSRNFSCMFWNAHMKELTSAIIDPL
SRMEPKVPRTWPLHVFIPACTIALIFLAIVIIQRKRI

>NP_005801.3 killer cell lectin-like receptor subfamily G member 1 isoform b [Homo sapiens]
MTDSVIYSMLELPTATQAQNDYGPQQKSSSSRPSCSCLVAIALGLLTAVLLSVLLYQWILCQGSNYSTCA
SCPSCPDRWMKYGNHCYYFSVEEKDWNSSLEFCLARDSHLLVITDNQEMSLLQVFLSEAFCWIGLRNNSG
WRWEDGSPLNFSRISSNSFVQTCGAINKNGLQASSCEVPLHWVCKKVRL

>NP_998795.1 B- and T-lymphocyte attenuator precursor [Rattus norvegicus]
MKTVPAMLVTPRSFREFFILLLGLWSILCKEPTKRIGEECRVQLKIKRNSSRSAWTGELFKIECPVTYCV
HRPNVTWCKHNGTRCVPLEVGPQLHTSWVENDQASAFVLYFEPIHLSDDGVYTCSANLNSEVINSHSVVI
HVTERTQNCSEHPLITASDIPDATNASRPSTMEERPGRTWLLYALLPLGTSLLLLACVCLLCFLRRIQGK
EKKPSDLAGRERETNLVDIPVSSRTNSQILTSETGIYDNDPWSSRLGESESTISSQLEGNKQGIVYASLN
HCVIGRTPRQASKIQEAPTEYASICVRS

>sp|Q16520.1|BATF_HUMAN RecName: Full=Basic leucine zipper transcriptional factor ATF-like; AltName: Full=B-cell-activating transcription factor; Short=B-ATF; AltName: Full=SF-HT-activated gene 2 protein; Short=SFA-2
MPHSSDSSDSSFSRSPPPGKQDSSDDVRRVQRREKNRIAAQKSRQRQTQKADTLHLESEDLEKQNAALRK
EIKQLTEELKYFTSVLNSHEPLCSVLAASTPSPPEVVYSAHAFHQPHVSSPRFQP

>NP_776511.1 interferon gamma precursor [Bos taurus]
MKYTSYFLALLLCGLLGFSGSYGQGQFFREIENLKEYFNASSPDVAKGGPLFSEILKNWKDESDKKIIQS
QIVSFYFKLFENLKDNQVIQRSMDIIKQDMFQKFLNGSSEKLEDFKKLIQIPVDDLQIQRKAINELIKVM
NDLSPKSNLRKRKRSQNLFRGRRAST

>sp|O95971.1|BY55_HUMAN RecName: Full=CD160 antigen; AltName: Full=Natural killer cell receptor BY55; AltName: CD_antigen=CD160; Contains: RecName: Full=CD160 antigen, soluble form; Flags: Precursor
MLLEPGRGCCALAILLAIVDIQSGGCINITSSASQEGTRLNLICTVWHKKEEAEGFVVFLCKDRSGDCSP
ETSLKQLRLKRDPGIDGVGEISSQLMFTISQVTPLHSGTYQCCARSQKSGIRLQGHFFSILFTETGNYTV
TGLKQRQHLEFSHNEGTLSSGFLQEKVWVMLVTSLVALQAL

>NP_067371.1 programmed cell death 1 ligand 2 precursor [Mus musculus]
MLLLLPILNLSLQLHPVAALFTVTAPKEVYTVDVGSSVSLECDFDRRECTELEGIRASLQKVENDTSLQS
ERATLLEEQLPLGKALFHIPSVQVRDSGQYRCLVICGAAWDYKYLTVKVKASYMRIDTRILEVPGTGEVQ
LTCQARGYPLAEVSWQNVSVPANTSHIRTPEGLYQVTSVLRLKPQPSRNFSCMFWNAHMKELTSAIIDPL
SRMEPKVPRTWPLHVFIPACTIALIFLAIVIIQRKRI

>NP_060271.1 CKLF-like MARVEL transmembrane domain-containing protein 6 [Homo
sapiens]
MENGAVYSPTTEEDPGPARGPRSGLAAYFFMGRLPLLRRVLKGLQLLLSLLAFICEEVVSQCTLCGGLYF
FEFVSCSAFLLSLLILIVYCTPFYERVDTTKVKSSDFYITLGTGCVFLLASIIFVSTHDRTSAEIAAIVF
GFIASFMFLLDFITMLYEKRQESQLRKPENTTRAEALTEPLNA

>NP_054862.1 programmed cell death 1 ligand 1 isoform a precursor [Homo sapiens]
MRIFAVFIFMTYWHLLNAFTVTVPKDLYVVEYGSNMTIECKFPVEKQLDLAALIVYWEMEDKNIIQFVHG
EEDLKVQHSSYRQRARLLKDQLSLGNAALQITDVKLQDAGVYRCMISYGGADYKRITVKVNAPYNKINQR
ILVVDPVTSEHELTCQAEGYPKAEVIWTSSDHQVLSGKTTTTNSKREEKLFNVTSTLRINTTTNEIFYCT
FRRLDPEENHTAELVIPELPLAHPPNERTHLVILGAILLCLGVALTFIFRLRKGRMMDVKKCGIQDTNSK
KQSDTHLEET

>NP_035463.1 C-C motif chemokine 2 precursor [Mus musculus]
MQVPVMLLGLLFTVAGWSIHVLAQPDAVNAPLTCCYSFTSKMIPMSRLESYKRITSSRCPKEAVVFVTKL
KREVCADPKKEWVQTYIKNLDRNQMRSEPTTLFKTASALRSSAPLNVKLTRKSEANASTTFSTTTSSTSV
GVTSVTVN

>NP_032505.1 lymphocyte activation gene 3 protein precursor [Mus musculus]
MREDLLLGFLLLGLLWEAPVVSSGPGKELPVVWAQEGAPVHLPCSLKSPNLDPNFLRRGGVIWQHQPDSG
QPTPIPALDLHQGMPSPRQPAPGRYTVLSVAPGGLRSGRQPLHPHVQLEERGLQRGDFSLWLRPALRTDA
GEYHATVRLPNRALSCSLRLRVGQASMIASPSGVLKLSDWVLLNCSFSRPDRPVSVHWFQGQNRVPVYNS
PRHFLAETFLLLPQVSPLDSGTWGCVLTYRDGFNVSITYNLKVLGLEPVAPLTVYAAEGSRVELPCHLPP
GVGTPSLLIAKWTPPGGGPELPVAGKSGNFTLHLEAVGLAQAGTYTCSIHLQGQQLNATVTLAVITVTPK
SFGLPGSRGKLLCEVTPASGKERFVWRPLNNLSRSCPGPVLEIQEARLLAERWQCQLYEGQRLLGATVYA
AESSSGAHSARRISGDLKGGHLVLVLILGALSLFLLVAGAFGFHWWRKQLLLRRFSALEHGIQPFPAQRK
IEELERELETEMGQEPEPEPEPQLEPEPRQL

>NP_006029.1 spermatogenesis-associated protein 2 [Homo sapiens]
MGKPSSMDTKFKDDLFRKYVQFHESKVDTTTSRQRPGSDECLRVAASTLLSLHKVDPFYRFRLIQFYEVV
ESSLRSLSSSSLRALHGAFSMLETVGINLFLYPWKKEFRSIKTYTGPFVYYVKSTLLEEDIRAILSCMGY
TPELGTAYKLRELVETLQVKMVSFELFLAKVECEQMLEIHSQVKDKGYSELDIVSERKSSAEDVRGCSDA
LRRRAEGREHLTASMSRVALQKSASERAAKDYYKPRVTKPSRSVDAYDSYWESRKPPLKASLSLRKEPVA
TDVGDDLKDEIIRPSPSLLTMASSPHGSPDVLPPASPSNGPALLRGTYFSTQDDVDLYTDSEPRATYRRQ
DALRPDVWLLRNDAHSLYHKRSPPAKESALSKCQSCGLSCSSSLCQRCDSLLTCPPASKPSAFPSKASTH
DSLAHGASLREKYPGQTQGLDRLPHLHSKSKPSTTPTSRCGFCNRPGATNTCTQCSKVSCDACLSAYHYD
PCYKKSELHKFMPNNQLNYKSTQLSHLVYR

>NP_000976.1 60S ribosomal protein L17 isoform a [Homo sapiens]
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM

SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_002180.1 interleukin-15 receptor subunit alpha isoform 1 precursor [Homo sapiens]
MAPRRARGCRTLGLPALLLLLLLRPPATRGITCPPPMSVEHADIWVKSYSLYSRERYICNSGFKRKAGTS
SLTECVLNKATNVAHWTTPSLKCIRDPALVHQRPAPPSTVTTAGVTPQPESLSPSGKEPAASSPSSNNTA
ATTAAIVPGSQLMPSKSPSTGTTEISSHESSHGTPSQTTAKNWELTASASHQPPGVYPQGHSDTTVAIST
STVLLCGLSAVSLLACYLKSRQTPPLASVEMEAMEALPVTWGTSSRDEDLENCSHHL

>sp|Q61790.1|LAG3_MOUSE RecName: Full=Lymphocyte activation gene 3 protein; Short=LAG-3; AltName: Full=Activation-induced cytidine deaminase-linked autoimmunity protein; Short=Aida; AltName: CD_antigen=CD223; Contains: RecName: Full=Secreted lymphocyte activation gene 3 protein; Short=sLAG-3; Flags: Precursor
MREDLLLGFLLLGLLWEAPVVSSGPGKELPVVWAQEGAPVHLPCSLKSPNLDPNFLRRGGVIWQHQPDSG
QPTPIPALDLHQGMPSPRQPAPGRYTVLSVAPGGLRSGRQPLHPHVQLEERGLQRGDFSLWLRPALRTDA
GEYHATVRLPNRALSCSLRLRVGQASMIASPSGVLKLSDWVLLNCSFSRPDRPVSVHWFQGQNRVPVYNS
PRHFLAETFLLLPQVSPLDSGTWGCVLTYRDGFNVSITYNLKVLGLEPVAPLTVYAAEGSRVELPCHLPP
GVGTPSLLIAKWTPPGGGPELPVAGKSGNFTLHLEAVGLAQAGTYTCSIHLQGQQLNATVTLAVITVTPK
SFGLPGSRGKLLCEVTPASGKERFVWRPLNNLSRSCPGPVLEIQEARLLAERWQCQLYEGQRLLGATVYA
AESSSGAHSARRISGDLKGGHLVLVLILGALSLFLLVAGAFGFHWWRKQLLLRRFSALEHGIQPFPAQRK
IEELERELETEMGQEPEPEPEPQLEPEPRQL

>sp|Q02242.1|PDCD1_MOUSE RecName: Full=Programmed cell death protein 1; Short=Protein PD-1; Short=mPD-1; AltName: CD_antigen=CD279; Flags: Precursor
MWVRQVPWSFTWAVLQLSWQSGWLLEVPNGPWRSLTFYPAWLTVSEGANATFTCSLSNWSEDLMLNWNRL
SPSNQTEKQAAFCNGLSQPVQDARFQIIQLPNRHDFHMNILDTRRNDSGIYLCGAISLHPKAKIEESPGA
ELVVTERILETSTRYPSPSPKPEGRFQGMVIGIMSALVGIPVLLLLAWALAVFCSTSMSEARGAGSKDDT
LKEEPSAAPVPSVAYEELDFQGREKTPELPTACVHTEYATIVFTEGLGASAMGRRGSADGLQGPRPPRHE
DGHCSWPL

>sp|P18621.3|RL17_HUMAN RecName: Full=60S ribosomal protein L17; AltName: Full=60S ribosomal protein L23; AltName: Full=Large ribosomal subunit protein uL22; AltName: Full=PD-1
MVRYSLDPENPTKSCKSRGSNLRVHFKNTRETAQAIKGMHIRKATKYLKDVTLQKQCVPFRRYNGGVGRC
AQAKQWGWTQGRWPKKSAEFLLHMLKNAESNAELKGLDVDSLVIEHIQVNKAPKMRRRTYRAHGRINPYM
SSPCHIEMILTEKEQIVPKPEEEVAQKKKISQKKLKKQKLMARE

>NP_001103570.1 protein BANP isoform 1 [Mus musculus]
MMSEQDLADVVQIAVEDLSPDHPVVLENHVVTDDDEPALKRQRLEINCQDPSIKSFLYSINQTICLRLDS
IEAKLQALEATCKSLEEKLDLVTNKQHSPIQVPMVAGSPLGATQTCNKVRCVVPQTTVILNNDRQNAIVA
KMEDPLSNRAPDSLENIISNAVPGRRQNTIVVKVPGQDDSHNEDGESGSEASDSVSNCGQPGSQNIGSNV
TLITLNSEEDYPNGTWLGDENNPEMRVRCAIIPSDMLHISTNCRTAEKMALTLLDYLFHREVQAVSNLSG
QGKHGKKQLDPLTIYGIRCHLFYKFGITESDWYRIKQSIDSKCRTAWRRKQRGQSLAVKSFSRRTPSSSS
YSASETMMGTPPPTSELQQSQPQALHYALANAQQVQIHQIGEDGQVQVGHLHIAQVPQGEQVQITQDSEG
NLQIHHVGQDGQSWGLCQNPIPVSGDSVAQANPSQLWPLGGDTLDLPAGNEMIQVLQGAQLIAVASSDPA
ATGVDGSPLQGSDIQVQYVQLAPVSDHTAAAQTAEALQPTLQPDMQLEHGAIQIQ

>NP_001273682.1 CD27 antigen isoform c precursor [Mus musculus]
MAWPPPYWLCMLGTLVGLSATLAPNSCPDKHYWTGGGLCCRMCEPGTFFVKDCEQDRTAAQCDPCIPGTS
FSPDYHTRPHCESCRHCNSEKPSWPLHRQLPNSTVYSQRSSHRPLCSSDCIRIFVTFSSMFLIFVLGAIL
FFHQRRNHGPNEDRQAVPEEPCPYSCPREEEGSAIPIQEDYRKPEPAFYP

>NP_001028298.1 CD27 antigen isoform a precursor [Mus musculus]
MAWPPPYWLCMLGTLVGLSATLAPNSCPDKHYWTGGGLCCRMCEPGTFFVKDCEQDRTAAQCDPCIPGTS
FSPDYHTRPHCESCRHCNSGFLIRNCTVTANAECSCSKNWQCRDQECTECDPPLNPALTRQPSETPSPQP
PPTHLPHGTEKPSWPLHRQLPNSTVYSQRSSHRPLCSSDCIRIFVTFSSMFLIFVLGAILFFHQRRNHGP
NEDRQAVPEEPCPYSCPREEEGSAIPIQEDYRKPEPAFYP

>NP_001334150.1 lysine-specific histone demethylase 1A isoform 1 [Mus musculus]
MLSGKKAAAAAAAAAAAAAAGTEAGSGAAGGAENGSEVAAPPAGLTGPTDMATGAAGERTPRKKEPPRAS
PPGGLAEPPGSAGPQAGPTAGPGSATPMETGIAETPEGRRTSRRKRAKVEYREMDESLANLSEDEYYSEE
ERNAKAEKEKKLPPPPPQAPPEEENESEPEEPSGQAGGLQDDSSGGYGDGQASGVEGAAFQSRLPHDRMT
SQEAACFPDIISGPQQTQKVFLFIRNRTLQLWLDNPKIQLTFEATLQQLEAPYNSDTVLVHRVHSYLERH
GLINFGIYKRIKPLPIKKTGKVIIIGSGVSGLAAARQLQSFGMDVTLLEARDRVGGRVATFRKGNYVADL
GAMVVTGLGGNPMAVVSKQVNMELAKIKQKCPLYEANGQAVPKEKDEMVEQEFNRLLEATSYLSHQLDFN
VLNNKPVSLGQALEVVIQLQEKHVKDEQIEHWKKIVKTQEELKELLNKMVNLKEKIKELHQQYKEASEVK
PPRDITAEFLVKSKHRDLTALCKEYDELAETQGKLEEKLQELEANPPSDVYLSSRDRQILDWHFANLEFA
NATPLSTLSLKHWDQDDDFEFTGSHLTVRNGYSCVPVALAEGLDIKLNTAVRQVRYTASGCEVIAVNTRS
TSQTFIYKCDAVLCTLPLGVLKQQPPAVQFVPPLPEWKTSAVQRMGFGNLNKVVLCFDRVFWDPSVNLFG
HVGSTTASRGELFLFWNLYKAPILLALVAGEAAGIMENISDDVIVGRCLAILKGIFGSSAVPQPKETVVS
RWRADPWARGSYSYVAAGSSGNDYDLMAQPITPGPSIPGAPQPIPRLFFAGEHTIRNYPATVHGALLSGL
REAGRIADQFLGAMYTLPRQATPGVPAQQSPSM

>NP_001301026.1 programmed cell death protein 1 precursor [Canis lupus
familiaris]
MGSRRGPWPLVWAVLQLGWWPGWLLDSPDRPWSPLTFSPAQLTVQEGENATFTCSLADIPDSFVLNWYRL
SPRNQTDKLAAFQEDRIEPGRDRRFRVTRLPNGRDFHMSIVAARLNDSGIYLCGAIYLPPNTQINESPRA
ELSVTERTLEPPTQSPSPPPRLSGQLQGLVIGVTSVLVGVLLLLLLTWVLAAVFPRATRGACVCGSEDEP
LKEGPDAAPVFTLDYGELDFQWREKTPEPPAPCAPEQTEYATIVFPGRPASPGRRASASSLQGAQPPSPE
DGPGLWPP

>pdb|7JVN|B Chain B, Tyrosine-protein phosphatase non-receptor type 11
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHF
RTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDCDIDV
PKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETL

>pdb|7JVN|A Chain A, Tyrosine-protein phosphatase non-receptor type 11
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL

QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHF
RTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDCDIDV
PKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETL

>pdb|7JVM|B Chain B, Tyrosine-protein phosphatase non-receptor type 11
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHF
RTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDCDIDV
PKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETL

>pdb|7JVM|A Chain A, Tyrosine-protein phosphatase non-receptor type 11
MTSRRWFHPNITGVEAENLLLTRGVDGSFLARPSKSNPGDFTLSVRRNGAVTHIKIQNTGDYYDLYGGEK
FATLAELVQYYMEHHGQLKEKNGDVIELKYPLNCADPTSERWFHGHLSGKEAEKLLTEKGKHGSFLVRES
QSHPGDFVLSVRTGDDKGESNDGKSKVTHVMIRCQELKYDVGGGERFDSLTDLVEHYKKNPMVETLGTVL
QLKQPLNTTRINAAEIESRVRELSKLAETTDKVKQGFWEEFETLQQQECKLLYSRKEGQRQENKNKNRYK
NILPFDHTRVVLHDGDPNEPVSDYINANIIMPEFETKCNNSKPKKSYIATQGCLQNTVNDFWRMVFQENS
RVIVMTTKEVERGKSKCVKYWPDEYALKEYGVMRVRNVKESAAHDYTLRELKLSKVGQGNTERTVWQYHF
RTWPDHGVPSDPGGVLDFLEEVHHKQESIMDAGPVVVHCSAGIGRTGTFIVIDILIDIIREKGVDCDIDV
PKTIQMVRSQRSGMVQTEAQYRFIYMAVQHYIETL

>NP_001258652.1 F-box only protein 38 isoform c [Homo sapiens]
MGPRKKSVKTCIMNNEIPEEMTADETKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDASFLTLLKKMPDVEQLYGLHPRYLERRRVRGHEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWTRLVDINLVRCHALKLDSFGQFIELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDDNNAQNNNANIHDNNHHHPDDSDEENDFRQDLQPGEQQFAADALNEMEDIVQEDGEVVAESGN
NTPAHSQAIIPVDVDEEQAGPSGLQRVVKPTSITVHDSESDDEEDSLELQEVWIPKNGTRRYSEREEKTG
ESVQSRELSEVAKTKPRHAMKRKRTADKSTSTSDPVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDC
PKMMFIHATRCRVLKHLKVENAPIVNRFDYAQCKKLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLE
QKLFSGPYPYHICIIHEFSNPPNVRNKVRIRSWMDTIANINQELIKYEFFPEATRSEEDLKKYPKYPWGR
EIYTLEGVVDGAPYSMISDFPWLRSLRAAEPNSFARYDFEDDEESTIYAPRRKGQLSADICMETIGEEIS
EMRQMKKGVFQRVVAIFIHYCDVNGEPVEDDYI

>NP_001100397.1 programmed cell death protein 1 precursor [Rattus norvegicus]
MWVQQVPWSFTWAVLQLSWQSGWLLEVLNKPWRPLTFSPTWLTVSEGANATFTCSFSNWSEDLKLNWYRL
SPSNQTEKQAAFCNGYSQPVRDARFQIVQLPNGHDFHMNILDARRNDSGIYLCGAISLPPKAQIKESPGA
ELVVTERILETPTRYPRPSPKPEGQFQGLVIVIMSVLVGIPVLLLLAWALAAFCSTGMSEAREAGRKEDP
PKEAHAAAPVPSVAYEELDFQGREKTPEPAPCVHTEYATIVFTEGLDASAIGRRGSADGPQGPRPPRHED
GHCSWPL

>NP_995308.1 F-box only protein 38 isoform b [Homo sapiens]
MGPRKKSVKTCIMNNEIPEEMTADETKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDASFLTLLKKMPDVEQLYGLHPRYLERRRVRGHEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWTRLVDINLVRCHALKLDSFGQFIELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDDNNAQNNNANIHDNNHHHPDDSDEENDFRQDLQPGEQQFAADALNEMEDIVQEDGEVVAESGN
NTPAHSQAIIPVDVDEEQAGPSGLQRVVKPTSITVHDSESDDEEDSLELQEVWIPKNGTRRYSEREEKTG
ESVQSRELSVSGKGKTPLRKRYNSHQMGQSKQFPLEESSCEKGCQVTSEQIKADMKAARDIPEKKKNKDV
YPSCSSTTASTVGNSSSHNTASQSPDFVRTVNSGGSSEPSPTEVDVSRQCACSPGGSEDSEAMEEGDAES
SVCPRCCCHRPQESQRRTSRCSDEERPSTSRACVVNGPDGTRSAFSFRTLPQGGSSGPAHDERTNGSGSG
ATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVLLVSESEVAKTKPRHAMKRKRTADKSTSTSDP
VIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRFDYAQCKK
LNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKVRIRSWMD
TIANINQELIKYEFFPEATRSEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRAAEPNSFA
RYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKKGVFQRVVAIFIHYCDVNGEPVEDDYI

>NP_110420.3 F-box only protein 38 isoform a [Homo sapiens]
MGPRKKSVKTCIMNNEIPEEMTADETKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDASFLTLLKKMPDVEQLYGLHPRYLERRRVRGHEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWTRLVDINLVRCHALKLDSFGQFIELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDDNNAQNNNANIHDNNHHHPDDSDEENDFRQDLQPGEQQFAADALNEMEDIVQEDGEVVAESGN
NTPAHSQAIIPVDVDEEQAGPSGLQRVVKPTSITVHDSESDDEEDSLELQEVWIPKNGTRRYSEREEKTG
ESVQSRELSVSGKGKTPLRKRYNSHQMGQSKQFPLEESSCEKGCQVTSEQIKADMKAARDIPEKKKNKDV
YPSCSSTTASTVGNSSSHNTASQSPDFVRTVNSGGSSEPSPTEVDVSRQCACSPGGSEDSEAMEEGDAES
SVCPRCCCHRPQESQRRTSRCSDEERPSTSRACVVNGPDEVAKTKPRHAMKRKRTADKSTSTSDPVIEDD
HVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRFDYAQCKKLNMDQ
VLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKVRIRSWMDTIANI
NQELIKYEFFPEATRSEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRAAEPNSFARYDFE
DDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKKGVFQRVVAIFIHYCDVNGEPVEDDYI

>NP_068820.1 tumor necrosis factor receptor superfamily member 18 isoform 2
precursor [Mus musculus]
MGAWAMLYGVSMLCVLDLGQPSVVEEPGCGPGKVQNGSGNNTRCCSLYAPGKEDCPKERCICVTPEYHCG
DPQCKICKHYPCQPGQRVESQGDIVFGFRCVACAMGTFSAGRDGHCRLWTKDPAIRGGAVVS

>NP_033426.1 tumor necrosis factor receptor superfamily member 18 isoform 1
precursor [Mus musculus]
MGAWAMLYGVSMLCVLDLGQPSVVEEPGCGPGKVQNGSGNNTRCCSLYAPGKEDCPKERCICVTPEYHCG
DPQCKICKHYPCQPGQRVESQGDIVFGFRCVACAMGTFSAGRDGHCRLWTNCSQFGFLTMFPGNKTHNAV
CIPEPLPTEQYGHLTVIFLVMAACIFFLTTVQLGLHIWQLRRQHMCPRETQPFAEVQLSAEDACSFQFPE

EERGEQTEEKCHLGGRWP

>NP_001153044.1 V-type immunoglobulin domain-containing suppressor of T-cell activation isoform 2 precursor [Mus musculus]
MGVPAVPEASSPRWGTLLLAIFLAASRGLVAAFKVTTPYSLYVCPEGQNATLTCRILGPVSKGHDVTIYK
TWYLSSRGEVQMCKEHRPIRNFTLQHLQHHGSHLKANASHDQPQKHGLELASDHHGNFSITLRNVTPRDS
GLYCCLVIELKNHHPEQRFYGSMELQVQAGKGSGSTCMASNEQDSDSITAAALATGACIVGILCLPLILL
LVYKQRQVASHRRAQELVRMDSNTQGIENPGFETTPPFQGMPEAKTRPPLSYVAQRQPSESGRYLLSDPS
TPLSPPGPGDVFFPSLDPVPDSPNSEAI

>NP_083008.1 V-type immunoglobulin domain-containing suppressor of T-cell activation isoform 1 precursor [Mus musculus]
MGVPAVPEASSPRWGTLLLAIFLAASRGLVAAFKVTTPYSLYVCPEGQNATLTCRILGPVSKGHDVTIYK
TWYLSSRGEVQMCKEHRPIRNFTLQHLQHHGSHLKANASHDQPQKHGLELASDHHGNFSITLRNVTPRDS
GLYCCLVIELKNHHPEQRFYGSMELQVQAGKGSGSTCMASNEQDSDSITAAALATGACIVGILCLPLILL
LVYKQRQVASHRRAQELVRMDSSNTQGIENPGFETTPPFQGMPEAKTRPPLSYVAQRQPSESGRYLLSDP
STPLSPPGPGDVFFPSLDPVPDSPNSEAI

>NP_061931.1 DNA damage-inducible transcript 4 protein [Homo sapiens]
MPSLWDRFSSSSTSSSPSSLPRTPTPDRPPRSAWGSATREEGFDRSTSLESSDCESLDSSNSGFGPEEDT
AYLDGVSLPDFELLSDPEDEHLCANLMQLLQESLAQARLGSRRPARLLMPSQLVSQVGKELLRLAYSEPC
GLRGALLDVCVEQGKSCHSVGQLALDPSLVPTFQLTLVLRLDSRLWPKIQGLFSSANSPFLPGFSQSLTL
STGFRVIKKKLYSSEQLLIEEC

>pdb|6VP8|C Chain C, Leucine-rich repeat serine/threonine-protein kinase 2
LTRRILLPKNVIVECMVATHHNSRNASIWLGCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPV
EKESWIVSGTQSGTLLVINTEDGKKRHTLEKMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKT
VKLKGAAPLKILNIGNVSTPLMCLSESTNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAF
SDSNIITVVVDTALYIAKQNSPVVEVWDKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCL
QKNTALWIGTGGGHILLLDLSTRRLIRVIYNFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEI
QSCLTVWDI

>pdb|6VP8|B Chain B, Leucine-rich repeat serine/threonine-protein kinase 2
PSSLSDHRPVIELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIY
LNWSPEAYCLVGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLK
KWALYSFNDGEEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQ
APEFLLGDGSFGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMEL
A

>pdb|6VP8|A Chain A, Leucine-rich repeat serine/threonine-protein kinase 2
VPYNRMKLMIVGNXGSGKTTLLQQLMKTKKSDLGMQSATVGIDVKDWPIQIRDKRKRDLVLNVWDFAGRE
EFYSTHPHFMTQRALYLAVYDLSKGQAEVDAMKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACMSKI
TKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILSERK
NVPIEFPVIDRKRLLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKIMAQ
ILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSSLSDHRPV
IELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIYLNWSPEAYCL
VGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSFNDG
EEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQAPEFLLGDGS

FGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMELASKGSLDRLL
QQDKASLTRTLQHRIALHVADGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCRMGI
KTSEGTPGFRAPEVARGNVIYNQQADVYSFGLLLYDILTTGGRIVEGLKFPNEFDELEIQGKLPDPVKEY
GCAPWPMVEKLIKQCLKENPQERPTSAQVFDILNSAELVCLTRRILLPKNVIVECMVATHHNSRNASIWL
GCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRHTLE
KMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCLSESTNS
TERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTALYIAKQNSPVVEVWDKK
TEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCLQKNTALWIGTGGGHILLLDLSTRRLIRVIY
NFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKELAE
KMRRTSVE

>pdb|6VP7|A Chain A, Leucine-rich repeat serine/threonine-protein kinase 2
KKAVPYNRMKLMIVGNXGSGKTTLLQQLMKTKKSDLGMQSATVGIDVKDWPIQIRDKRKRDLVLNVWDFA
GREEFYSTHPHFMTQRALYLAVYDLSKGQAEVDAMKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACM
SKITKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILS
ERKNVPIEFPVIDRKRLLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKI
MAQILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSSLSDH
RPVIELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIYLNWSPEA
YCLVGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSF
NDGEEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQAPEFLLG
DGSFGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMELASKGSLD
RLLQQDKASLTRTLQHRIALHVADGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCR
MGIKTSEGTPGFRAPEVARGNVIYNQQADVYSFGLLLYDILTTGGRIVEGLKFPNEFDELEIQGKLPDPV
KEYGCAPWPMVEKLIKQCLKENPQERPTSAQVFDILNSAELVCLTRRILLPKNVIVECMVATHHNSRNAS
IWLGCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRH
TLEKMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCLSES
TNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTALYIAKQNSPVVEVW
DKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCLQKNTALWIGTGGGHILLLDLSTRRLIR
VIYNFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKE
LAEKMRRTSVE

>pdb|6VP6|C Chain C, Leucine-rich repeat serine/threonine-protein kinase 2
KKAVPYNRMKLMIVGNXGSGKTTLLQQLMKTKKSDLGMQSATVGIDVKDWPIQIRDKRKRDLVLNVWDFA
GREEFYSTHPHFMTQRALYLAVYDLSKGQAEVDAMKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACM
SKITKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILS
ERKNVPIEFPVIDRKRLLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKI
MAQILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSSLSDH
RPVIELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIYLNWSPEA
YCLVGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSF
NDGEEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQAPEFLLG
DGSFGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMELASKGSLD
RLLQQDKASLTRTLQHRIALHVADGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCR
MGIKTSEGTPGFRAPEVARGNVIYNQQADVYSFGLLLYDILTTGGRIVEGLKFPNEFDELEIQGKLPDPV
KEYGCAPWPMVEKLIKQCLKENPQERPTSAQVFDILNSAELVCLTRRILLPKNVIVECMVATHHNSRNAS
IWLGCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRH
TLEKMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCLSES
TNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTALYIAKQNSPVVEVW
DKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCLQKNTALWIGTGGGHILLLDLSTRRLIR

VIYNFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKE
LAEKMRRTSVE

>pdb|6VP6|B Chain B, Leucine-rich repeat serine/threonine-protein kinase 2
KKAVPYNRMKLMIVGNXGSGKTTLLQQLMKTKKSDLGMQSATVGIDVKDWPIQIRDKRKRDLVLNVWDFA
GREEFYSTHPHFMTQRALYLAVYDLSKGQAEVDAMKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACM
SKITKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILS
ERKNVPIEFPVIDRKRLLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKI
MAQILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSSLSDH
RPVIELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIYLNWSPEA
YCLVGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSF
NDGEEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQAPEFLLG
DGSFGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMELASKGSLD
RLLQQDKASLTRTLQHRIALHVADGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCR
MGIKTSEGTPGFRAPEVARGNVIYNQQADVYSFGLLLYDILTTGGRIVEGLKFPNEFDELEIQGKLPDPV
KEYGCAPWPMVEKLIKQCLKENPQERPTSAQVFDILNSAELVCLTRRILLPKNVIVECMVATHHNSRNAS
IWLGCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRH
TLEKMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCLSES
TNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTALYIAKQNSPVVEVW
DKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCLQKNTALWIGTGGGHILLLDLSTRRLIR
VIYNFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKE
LAEKMRRTSVE

>pdb|6VP6|A Chain A, Leucine-rich repeat serine/threonine-protein kinase 2
KKAVPYNRMKLMIVGNXGSGKTTLLQQLMKTKKSDLGMQSATVGIDVKDWPIQIRDKRKRDLVLNVWDFA
GREEFYSTHPHFMTQRALYLAVYDLSKGQAEVDAMKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACM
SKITKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILS
ERKNVPIEFPVIDRKRLLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKI
MAQILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSSLSDH
RPVIELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIYLNWSPEA
YCLVGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSF
NDGEEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQAPEFLLG
DGSFGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMELASKGSLD
RLLQQDKASLTRTLQHRIALHVADGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCR
MGIKTSEGTPGFRAPEVARGNVIYNQQADVYSFGLLLYDILTTGGRIVEGLKFPNEFDELEIQGKLPDPV
KEYGCAPWPMVEKLIKQCLKENPQERPTSAQVFDILNSAELVCLTRRILLPKNVIVECMVATHHNSRNAS
IWLGCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRH
TLEKMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCLSES
TNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTALYIAKQNSPVVEVW
DKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCLQKNTALWIGTGGGHILLLDLSTRRLIR
VIYNFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKE
LAEKMRRTSVE

>pdb|6VNO|A Chain A, Leucine-rich repeat serine/threonine-protein kinase 2
KKAVPYNRMKLMIVGNXGSGKTTLLQQLMKTKKSDLGMQSATVGIDVKDWPIQIRDKRKRDLVLNVWDFA
GREEFYSTHPHFMTQRALYLAVYDLSKGQAEVDAMKPWLFNIKARASSSPVILVGTHLDVSDEKQRKACM
SKITKELLNKRGFPAIRDYHFVNATEESDALAKLRKTIINESLNFKIRDQLVVGQLIPDCYVELEKIILS
ERKNVPIEFPVIDRKRLLQLVRENQLQLDENELPHAVHFLNESGVLLHFQDPALQLSDLYFVEPKWLCKI

MAQILTVKVEGCPKHPKGIISRRDVEKFLSKKRKFPKNYMSQYFKLLEKFQIALPIGEEYLLVPSSLSDH
RPVIELPHCENSEIIIRLYEMPYFPMGFWSRLINRLLEISPYMLSGRERALRPNRMYWRQGIYLNWSPEA
YCLVGSEVLDNHPESFLKITVPSCRKGCILLGQVVDHIDSLMEEWFPGLLEIDICGEGETLLKKWALYSF
NDGEEHQKILLDDLMKKAEEGDLLVNPDQPRLTIPISQIAPDLILADLPRNIMLNNDELEFEQAPEFLLG
DGSFGSVYRAAYEGEEVAVKIFNKHTSLRLLRQELVVLCHLHHPSLISLLAAGIRPRMLVMELASKGSLD
RLLQQDKASLTRTLQHRIALHVADGLRYLHSAMIIYRDLKPHNVLLFTLYPNAAIIAKIADYGIAQYCCR
MGIKTSEGTPGFRAPEVARGNVIYNQQADVYSFGLLLYDILTTGGRIVEGLKFPNEFDELEIQGKLPDPV
KEYGCAPWPMVEKLIKQCLKENPQERPTSAQVFDILNSAELVCLTRRILLPKNVIVECMVATHHNSRNAS
IWLGCGHTDRGQLSFLDLNTEGYTSEEVADSRILCLALVHLPVEKESWIVSGTQSGTLLVINTEDGKKRH
TLEKMTDSVTCLYCNSFSKQSKQKNFLLVGTADGKLAIFEDKTVKLKGAAPLKILNIGNVSTPLMCLSES
TNSTERNVMWGGCGTKIFSFSNDFTIQKLIETRTSQLFSYAAFSDSNIITVVVDTALYIAKQNSPVVEVW
DKKTEKLCGLIDCVHFLREVMVKENKESKHKMSYSGRVKTLCLQKNTALWIGTGGGHILLLDLSTRRLIR
VIYNFCNSVRVMMTAQLGSLKNVMLVLGYNRKNTEGTQKQKEIQSCLTVWDINLPHEVQNLEKHIEVRKE
LAEKMRRTSVE

>NP_001240821.1 anion exchange protein 2 [Mus musculus]
MSSAPRRPASGADSLHTPEPESLSPGTPGFPEQEEDELRTLGVERFEEILQEAGSRGGEEPGRSYGEEDF
EYHRQSSHHIHHPLSTHLPPDARRRKTPQGPGRKPRRRPGASPTGETPTIEEGEEDEEEASEAEGFRAPP
QQPSPATTPSAVQFFLQEDEGAERKPERTSPSPPTQTPHQEAAPRASKGAQTGTLVEEMVAVASGTAGGD
DGGAAGRPLTKAQPGHRSYNLQERRRIGSMTGVEQALLPRVPTDESEAQTLATADLDLMKSHRFEDVPGV
RRHLVRKNAKGSTQAAREGREPGPTPRARPRAPHKPHEVFVELNELLLDKNQEPQWRETARWIKFEEDVE
EETERWGKPHVASLSFRSLLELRRTLAHGAVLLDLDQQTLPGVAHQVVEQMVISDQIKAEDRANVLRALL
LKHSHPSDEKEFSFPRNISAGSLGSLLGHHHAQGTESDPHVTEPLIGGVPETRLEVDRERELPPPAPPAG
ITRSKSKHELKLLEKIPENAEATVVLVGCVEFLSRPTMAFVRLREAVELDAVLEVPVPVRFLFLLLGPSS
ANMDYHEIGRSISTLMSDKQFHEAAYLADERDDLLTAINAFLDCSVVLPPSEVQGEELLRSVAHFQRQML
KKREEQGRLLPPGAGLEPKSAQDKALLQMVEVAGAAEDDPLRRTGRPFGGLIRDVRRRYPHYLSDFRDAL
DPQCLAAVIFIYFAALSPAITFGGLLGEKTKDLIGVSELIMSTALQGVVFCLLGAQPLLVIGFSGPLLVF
EEAFFSFCSSNELEYLVGRVWIGFWLVFLALLMVALEGSFLVRFVSRFTQEIFAFLISLIFIYETFYKLI
KIFQEHPLHGCSGSNDSEAGSSSSSNMTWATTILVPDNSSASGQSGQEKPRGQPNTALLSLVLMAGTFFI
AFFLRKFKNSRFFPGRIRRVIGDFGVPIAILIMVLVDYSIEDTYTQKLSVPSGFSVTAPDKRGWVINPLG
EKTPFPVWMMVASLLPAVLVFILIFMETQITTLIISKKERMLQKGSGFHLDLLLIVAMGGICALFGLPWL
AAATVRSVTHANALTVMSKAVAPGDKPKIQEVKEQRVTGLLVALLVGLSMVIGDLLRQIPLAVLFGIFLY
MGVTSLNGIQFYERLHLLLMPPKHHPDVTYVKKVRTMRMHLFTALQLLCLALLWAVMSTAASLAFPFILI
LTVPLRMVVLTRIFTEREMKCLDANEAEPVFDECEGVDEYNEMPMPV

>NP_033233.2 anion exchange protein 2 [Mus musculus]
MSSAPRRPASGADSLHTPEPESLSPGTPGFPEQEEDELRTLGVERFEEILQEAGSRGGEEPGRSYGEEDF
EYHRQSSHHIHHPLSTHLPPDARRRKTPQGPGRKPRRRPGASPTGETPTIEEGEEDEEEASEAEGFRAPP
QQPSPATTPSAVQFFLQEDEGAERKPERTSPSPPTQTPHQEAAPRASKGAQTGTLVEEMVAVASGTAGGD
DGGAAGRPLTKAQPGHRSYNLQERRRIGSMTGVEQALLPRVPTDESEAQTLATADLDLMKSHRFEDVPGV
RRHLVRKNAKGSTQAAREGREPGPTPRARPRAPHKPHEVFVELNELLLDKNQEPQWRETARWIKFEEDVE
EETERWGKPHVASLSFRSLLELRRTLAHGAVLLDLDQQTLPGVAHQVVEQMVISDQIKAEDRANVLRALL
LKHSHPSDEKEFSFPRNISAGSLGSLLGHHHAQGTESDPHVTEPLIGGVPETRLEVDRERELPPPAPPAG
ITRSKSKHELKLLEKIPENAEATVVLVGCVEFLSRPTMAFVRLREAVELDAVLEVPVPVRFLFLLLGPSS
ANMDYHEIGRSISTLMSDKQFHEAAYLADERDDLLTAINAFLDCSVVLPPSEVQGEELLRSVAHFQRQML
KKREEQGRLLPPGAGLEPKSAQDKALLQMVEVAGAAEDDPLRRTGRPFGGLIRDVRRRYPHYLSDFRDAL
DPQCLAAVIFIYFAALSPAITFGGLLGEKTKDLIGVSELIMSTALQGVVFCLLGAQPLLVIGFSGPLLVF
EEAFFSFCSSNELEYLVGRVWIGFWLVFLALLMVALEGSFLVRFVSRFTQEIFAFLISLIFIYETFYKLI

KIFQEHPLHGCSGSNDSEAGSSSSSNMTWATTILVPDNSSASGQSGQEKPRGQPNTALLSLVLMAGTFFI
AFFLRKFKNSRFFPGRIRRVIGDFGVPIAILIMVLVDYSIEDTYTQKLSVPSGFSVTAPDKRGWVINPLG
EKTPFPVWMMVASLLPAVLVFILIFMETQITTLIISKKERMLQKGSGFHLDLLLIVAMGGICALFGLPWL
AAATVRSVTHANALTVMSKAVAPGDKPKIQEVKEQRVTGLLVALLVGLSMVIGDLLRQIPLAVLFGIFLY
MGVTSLNGIQFYERLHLLLMPPKHHPDVTYVKKVRTMRMHLFTALQLLCLALLWAVMSTAASLAFPFILI
LTVPLRMVVLTRIFTEREMKCLDANEAEPVFDECEGVDEYNEMPMPV

>XP_016859782.1 programmed cell death protein 1 isoform X1 [Homo sapiens]
MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRM
SPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLE
DPSAVPVFSVDYGELDFQWREKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPED
GHCSWPL

>XP_006712636.1 programmed cell death protein 1 isoform X2 [Homo sapiens]
MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRM
SPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARG

>sp|Q6PIJ6.3|FBX38_HUMAN RecName: Full=F-box only protein 38
MGPRKKSVKTCIMNNEIPEEMTADETKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDASFLTLLKKMPDVEQLYGLHPRYLERRRVRGHEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWTRLVDINLVRCHALKLDSFGQFIELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDDNNAQNNNANIHDNNHHHPDDSDEENDFRQDLQPGEQQFAADALNEMEDIVQEDGEVVAESGN
NTPAHSQAIIPVDVDEEQAGPSGLQRVVKPTSITVHDSESDDEEDSLELQEVWIPKNGTRRYSEREEKTG
ESVQSRELSVSGKGKTPLRKRYNSHQMGQSKQFPLEESSCEKGCQVTSEQIKADMKAARDIPEKKKNKDV
YPSCSSTTASTVGNSSSHNTASQSPDFVRTVNSGGSSEPSPTEVDVSRQCACSPGGSEDSEAMEEGDAES
SVCPRCCCHRPQESQRRTSRCSDEERPSTSRACVVNGPDGTRSAFSFRTLPQGGSSGPAHDERTNGSGSG
ATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVLLVSESEVAKTKPRHAMKRKRTADKSTSTSDP
VIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRFDYAQCKK
LNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKVRIRSWMD
TIANINQELIKYEFFPEATRSEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRAAEPNSFA
RYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKKGVFQRVVAIFIHYCDVNGEPVEDDYI

>sp|Q8BMI0.1|FBX38_MOUSE RecName: Full=F-box only protein 38; AltName:
Full=Modulator of KLF7 activity; Short=MoKA
MGPRKKSAKVCVMDSEVAEEMTADEEKDYMNQLSHEVLCHIFRYLPLQDIMCMECLSRKLKEAVTLYLRV
VRVVDLCAGRWWEYMPSGFTDSSFLTLLKKMPDVEQLYGLHPRYLERRRVRGQEAFSIPGVLEALQACPN
LVGVETSHLELVESIWTYMPHVHILGKFRNRNGAFPIPPENKLKIPIGAKIQTLHLVGVNVPEIPCIPML
RHLYMKWVRLTKPQPFKDFLCISLRTFVMRNCAGPTNSLKYVPLVTGLASARNLEHLEMVRVPFLGGLIQ
HVVEDSWRSGGFRNLHTIVLGACKNALEVDLGYLIITAARRLHEVRIQPSLTKDGVFSALKMAELEFPQF
ETLHLGYVDEFLLQSRMANADLVKYGLADVVENPGIITDIGMKAVNEVFSCIKYLAIYNCPHLHNPYNWI
SDHSRWMRLVDINLVRCHALKLDSFGQFVELLPSLEFISLDQMFREPPKGCARVGLSAGTGIGVSSALVS
NQNSNNDNDNNAPNNNANLHDNNHHHPDDSDDDNDFRPDLQAGEAQFAADALNEMEDMVQEDGELVAESG

NGMPAHNREVLPVDADEEQAGPSGLQRVVKPTPIADHDSESDDEEDSLELQEVWAPKNGTRRYSEREEKT
GDSGQSRETAVSGKGKTPLRKRCNNSHQTGQAKPFPLEESSCEKGCQVTSEQIKADMKAARDVSEKKKSK
DVYPSCSSSSSSTAASTAGNASSPSTASQSPDFARTVTSSGSSEPSPPEVDVSRQCVCSPGGSEDSEAME
EGDAESSVCPRCCCLRPQESQRRTGRCSDEERPSTSRACVVNGADGTRSAFSFRTLPQGGSSGPAHDERT
NGSGCGATGEDRRGSSQPESCDVQSNEDYPRRPLTRARSRLSHVPLISESEVAKTKPCHAMKRKRTADKS
TSTSDPVIEDDHVQVLVLKSKNLVGVTMTNCGITDLVLKDCPKMMFIHATRCRVLKHLKVENAPIVNRFD
YAQCKKLNMDQVLDQILRMPPERNRIIYLRPMQQVDTLTLEQKLFSGPYPYHICIIHEFSNPPNVRNKVR
IRNWMDTIANINQELIKYEFFLEATRTEEDLKKYPKYPWGREIYTLEGVVDGAPYSMISDFPWLRSLRTA
EPNSFARYDFEDDEESTIYAPRRKGQLSADICMETIGEEISEMRQMKRGIFQRVVAIFIHYCDVNGEPVE
DDYI

>sp|Q7TSA3.2|BTLA_MOUSE RecName: Full=B- and T-lymphocyte attenuator; AltName:
Full=B- and T-lymphocyte-associated protein; AltName: CD_antigen=CD272; Flags:
Precursor
MKTVPAMLGTPRLFREFFILHLGLWSILCEKATKRNDEECPVQLTITRNSKQSARTGELFKIQCPVKYCV
HRPNVTWCKHNGTICVPLEVSPQLYTSWEENQSVPVFVLHFKPIHLSDNGSYSCSTNFNSQVINSHSVTI
HVRERTQNSSEHPLITVSDIPDATNASGPSTMEERPGRTWLLYTLLPLGALLLLLACVCLLCFLKRIQGK
EKKPSDLAGRDTNLVDIPASSRTNHQALPSGTGIYDNDPWSSMQDESELTISLQSERNNQGIVYASLNHC
VIGRNPRQENNMQEAPTEYASICVRS

>QNC41889.1 Sequence 406 from patent US 10654929
LDSPDRPWSPLTFSPAQLTVQEGENATFTCSLADIPDSFVLNWYRLSPRNQTDKLAAFQEDRIEPGRDRR
FRVTRLPNGRDFHMSIVAARLNDSGIYLCGAIYLPPNTQINESPRAELSVTERTLEPPTQSPSPPPRLSG
QLQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV
EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41888.1 Sequence 405 from patent US 10654929
LEVLNKPWRPLTFSPTWLTVSEGANATFTCSFSNWSEDLKLNWYRLSPSNQTEKQAAFCNGYSQPVRDAR
FQIVQLPNGHDFHMNILDARRNDSGIYLCGAISLPPKAQIKESPGAELVVTERILETPTRYPRPSPKPEG
QFQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV
EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41887.1 Sequence 404 from patent US 10654929
LESPDRPWNAPTFSPALLLVTEGDNATFTCSFSNASESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCR
FRVTRLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAG
QFQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV
EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41886.1 Sequence 403 from patent US 10654929
LEVPNGPWRSLTFYPAWLTVSEGANATFTCSLSNWSEDLMLNWNRLSPSNQTEKQAAFCNGLSQPVQDAR
FQIIQLPNRHDFHMNILDTRRNDSGIYLCGAISLHPKAKIEESPGAELVVTERILETSTRYPSPSPKPEG
RFQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV

EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41885.1 Sequence 402 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEGLSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41884.1 Sequence 401 from patent US 10654929
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FRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAG
QFQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV
EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41883.1 Sequence 400 from patent US 10654929
MGTPAQLLFLLLLWLPDTTG

>QNC41882.1 Sequence 399 from patent US 10654929
LDSPDRPWSPLTFSPAQLTVQEGENATFTCSLADIPDSFVLNWYRLSPRNQTDKLAAFQEDRIEPGRDRR
FRVTRLPNGRDFHMSIVAARLNDSGIYLCGAIYLPPNTQINESPRAELSVTERTLEPPTQSPSPPPRLSG
QLQGLVIGVTSVLVGVLLLLLLTWVLAAVFPRATRGACVCGSEDEPLKEGPDAAPVFTLDYGELDFQWRE
KTPEPPAPCAPEQTEYATIVFPGRPASPGRRASASSLQGAQPPSPEDGPGLWPP

>QNC41881.1 Sequence 398 from patent US 10654929
MGSRRGPWPLVWAVLQLGWWPGWLLDSPDRPWSPLTFSPAQLTVQEGENATFTCSLADIPDSFVLNWYRL
SPRNQTDKLAAFQEDRIEPGRDRRFRVTRLPNGRDFHMSIVAARLNDSGIYLCGAIYLPPNTQINESPRA
ELSVTERTLEPPTQSPSPPPRLSGQLQGLVIGVTSVLVGVLLLLLLTWVLAAVFPRATRGACVCGSEDEP
LKEGPDAAPVFTLDYGELDFQWREKTPEPPAPCAPEQTEYATIVFPGRPASPGRRASASSLQGAQPPSPE
DGPGLWPP

>QNC41880.1 Sequence 397 from patent US 10654929
LEVLNKPWRPLTFSPTWLTVSEGANATFTCSFSNWSEDLKLNWYRLSPSNQTEKQAAFCNGYSQPVRDAR
FQIVQLPNGHDFHMNILDARRNDSGIYLCGAISLHPKAQIKESPGAELVVTERILETPTRYPRPSPKPEG
QFQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV
EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41879.1 Sequence 396 from patent US 10654929
LEVLNKPWRPLTFSPTWLTVSEGANATFTCSFSNWSEDLKLNWYRLSPSNQTEKQAAFCNGYSQPVRDAR
FQIVQLPNGHDFHMNILDARRNDSGIYLCGAISLPPKAQIKESPGAELVVTERILETPTRYPRPSPKPEG
QFQGLVIVIMSVLVGIPVLLLLAWALAAFCSTGMSEAREAGRKEDPPKEAHAAAPVPSVAYEELDFQGRE

KTPEPAPCVHTEYATIVFTEGLDASAIGRRGSADGPQGPRPPRHEDGHCSWPL

>QNC41878.1 Sequence 395 from patent US 10654929
MWVQQVPWSFTWAVLQLSWQSGWLLEVLNKPWRPLTFSPTWLTVSEGANATFTCSFSNWSEDLKLNWYRL
SPSNQTEKQAAFCNGYSQPVRDARFQIVQLPNGHDFHMNILDARRNDSGIYLCGAISLPPKAQIKESPGA
ELVVTERILETPTRYPRPSPKPEGQFQGLVIVIMSVLVGIPVLLLLAWALAAFCSTGMSEAREAGRKEDP
PKEAHAAAPVPSVAYEELDFQGREKTPEPAPCVHTEYATIVFTEGLDASAIGRRGSADGPQGPRPPRHED
GHCSWPL

>QNC41877.1 Sequence 394 from patent US 10654929
LEVPNGPWRSLTFYPAWLTVSEGANATFTCSLSNWSEDLMLNWNRLSPSNQTEKQAAFCNGLSQPVQDAR
FQIIQLPNRHDFHMNILDTRRNDSGIYLCGAISLPPKAKIEESPGAELVVTERILETSTRYPSPSPKPEG
RFQGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGV
EVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLP
PSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNV
FSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41876.1 Sequence 393 from patent US 10654929
DTTGDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQ
DCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKASLRAELRVTERRAEVPTAHPSPSPR
PAGQFQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFN
WYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREP
QVYTLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSR
WQQGNVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41875.1 Sequence 392 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQAKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41874.1 Sequence 391 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKLQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41873.1 Sequence 390 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISAAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41872.1 Sequence 389 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAASLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41871.1 Sequence 388 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDALAAFPEDRSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41870.1 Sequence 387 from patent US 10654929
NPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPN
GRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQFQGGSGG
DKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHNAKTK
PREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTK
NQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFSCSVMHE
ALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41869.1 Sequence 386 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDLSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41868.1 Sequence 385 from patent US 10654929
DSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEGRSQPGQDCRF
RVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSPRPAGQ
FQTLVGGSGGDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGKGSGHHHHHH

>QNC41867.1 Sequence 384 from patent US 10654929
PGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPG
QDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSP
RPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLKEDPSAVPVFSVDYGELDFQW
REKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPEDGHCSWPL

>QNC41866.1 Sequence 383 from patent US 10654929

SGWLLEVPNGPWRSLTFYPAWLTVSEGANATFTCSLSNWSEDLMLNWNRLSPSNQTEKQAAFCNGLSQPV
QDARFQIIQLPNRHDFHMNILDTRRNDSGIYLCGAISLHPKAKIEESPGAELVVTERILETSTRYPSPSP
KPEGRFQGMVIGIMSALVGIPVLLLLAWALAVFCSTSMSEARGAGSKDDTLKEEPSAAPVPSVAYEELDF
QGREKTPELPTACVHTEYATIVFTEGLGASAMGRRGSADGLQGPRPPRHEDGHCSWPL

>QNC41865.1 Sequence 382 from patent US 10654929
PGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRMSPSNQTDKLAAFPEDRSQPG
QDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRAELRVTERRAEVPTAHPSPSP
RPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLKEDPSAVPVFSVDYGELDFQW
REKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPEDGHCSWPL

>QNC41864.1 Sequence 381 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRHTGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIKRTVAAPSVFIFPPSDEQLKSGTASVVCLL
NNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVT
KSFNRGEC

>QNC41863.1 Sequence 380 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDEDGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGTA
ALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTK
VDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVYT
LPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQG
NVFSCSVMHEALHNHYTQKSLSLSPGK

>QNC41862.1 Sequence 379 from patent US 10654929
HHHYNAPPT

>QNC41861.1 Sequence 378 from patent US 10654929
YASTRQT

>QNC41860.1 Sequence 377 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41859.1 Sequence 376 from patent US 10654929
WGRFGFDS

>QNC41858.1 Sequence 375 from patent US 10654929
NIDESGSITEYSPFVKG

>QNC41857.1 Sequence 374 from patent US 10654929
GFTFSDYWMD

>QNC41856.1 Sequence 373 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRQTGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIK

>QNC41855.1 Sequence 372 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDESGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41854.1 Sequence 371 from patent US 10654929
HHHYNAPPT

>QNC41853.1 Sequence 370 from patent US 10654929
YASTRET

>QNC41852.1 Sequence 369 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41851.1 Sequence 368 from patent US 10654929
WGRFGFDS

>QNC41850.1 Sequence 367 from patent US 10654929
NIDESGSITEYSPFVKG

>QNC41849.1 Sequence 366 from patent US 10654929
GFTFSDYWMD

>QNC41848.1 Sequence 365 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRETGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIK

>QNC41847.1 Sequence 364 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDESGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41846.1 Sequence 363 from patent US 10654929
HHHYNAPPT

>QNC41845.1 Sequence 362 from patent US 10654929
YASTRHT

>QNC41844.1 Sequence 361 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41843.1 Sequence 360 from patent US 10654929
WGRFGFDS

>QNC41842.1 Sequence 359 from patent US 10654929
NIDESGSITEYSPFVKG

>QNC41841.1 Sequence 358 from patent US 10654929
GFTFSDYWMD

>QNC41840.1 Sequence 357 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRHTGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIK

>QNC41839.1 Sequence 356 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDESGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41838.1 Sequence 355 from patent US 10654929
HHHYNAPPT

>QNC41837.1 Sequence 354 from patent US 10654929
YASTRQT

>QNC41836.1 Sequence 353 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41835.1 Sequence 352 from patent US 10654929
WGRFGFDS

>QNC41834.1 Sequence 351 from patent US 10654929
NIDEDGSITEYSPFVKG

>QNC41833.1 Sequence 350 from patent US 10654929
GFTFSDYWMD

>QNC41832.1 Sequence 349 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRQTGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIK

>QNC41831.1 Sequence 348 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDEDGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41830.1 Sequence 347 from patent US 10654929
HHHYNAPPT

>QNC41829.1 Sequence 346 from patent US 10654929
YASTRET

>QNC41828.1 Sequence 345 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41827.1 Sequence 344 from patent US 10654929
WGRFGFDS

>QNC41826.1 Sequence 343 from patent US 10654929
NIDEDGSITEYSPFVKG

>QNC41825.1 Sequence 342 from patent US 10654929
GFTFSDYWMD

>QNC41824.1 Sequence 341 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRETGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIK

>QNC41823.1 Sequence 340 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDEDGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41822.1 Sequence 339 from patent US 10654929
HHHYNAPPT

>QNC41821.1 Sequence 338 from patent US 10654929
YASTRHT

>QNC41820.1 Sequence 337 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41819.1 Sequence 336 from patent US 10654929
WGRFGFDS

>QNC41818.1 Sequence 335 from patent US 10654929
NIDEDGSITEYSPFVKG

>QNC41817.1 Sequence 334 from patent US 10654929
GFTFSDYWMD

>QNC41816.1 Sequence 333 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSLLSGSFNYLTWYQQKPGQPPKLLIFYASTRHTGVPDRFSGSG
SGTDFTLTISSLQAEDVAVYYCHHHYNAPPTFGPGTKVDIK

>QNC41815.1 Sequence 332 from patent US 10654929
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDYWMDWVRQAPGKGLVWVSNIDEDGSITEYSPFVKGRFTI
SRDNAKNTLYLQMNSLRAEDTAVYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41814.1 Sequence 331 from patent US 10654929
HHHYNAPPT

>QNC41813.1 Sequence 330 from patent US 10654929
YASTRHT

>QNC41812.1 Sequence 329 from patent US 10654929
KSSQSLLSGSFNYLT

>QNC41811.1 Sequence 328 from patent US 10654929

WGRFGFDS

>QNC41810.1 Sequence 327 from patent US 10654929
NIDEDGSITEYSPFVKG

>QNC41809.1 Sequence 326 from patent US 10654929
GFTFSDYWMD

>QNC41808.1 Sequence 325 from patent US 10654929
DIVMTQSPSSLAVSAGDRVTINCKSSQSLLSGSFNYLTWYQQKTGQAPKLLIFYASTRHTGVPDRFMGSG
SGTDFTLTINSFQTEDLGDYYCHHHYNAPPTFGPGTKLELR

>QNC41807.1 Sequence 324 from patent US 10654929
EVQLVESGGGLVKPGGSLKLSCAASGFTFSDYWMDWVRQAPGKGLEWVGNIDEDGSITEYSPFVKGRFTI
SRDNVKNTLYLQMNSVKSEDTATYYCTRWGRFGFDSWGQGTLVTVSS

>QNC41806.1 Sequence 323 from patent US 10654929
QQSANTPPWT

>QNC41805.1 Sequence 322 from patent US 10654929
AASSLQS

>QNC41804.1 Sequence 321 from patent US 10654929
RASQSISSYLN

>QNC41803.1 Sequence 320 from patent US 10654929
DIQMTQSPSSLSASVGDRVTITCRASQSISSYLNWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQSANTPPWTFGGGTKVEIK

>QNC41802.1 Sequence 319 from patent US 10654929
ARDPRYTTLTGSYYYGMDV

>QNC41801.1 Sequence 318 from patent US 10654929
IINPGGGSTSYAQKFQG

>QNC41800.1 Sequence 317 from patent US 10654929
YTFTSYYMH

>QNC41799.1 Sequence 316 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGLEWMGIINPGGGSTSYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARDPRYTTLTGSYYYGMDVWGQGTTVTVSS

>QNC41798.1 Sequence 315 from patent US 10654929
QQYDNFPIT

>QNC41797.1 Sequence 314 from patent US 10654929
WASTRES

>QNC41796.1 Sequence 313 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41795.1 Sequence 312 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQYDNFPITFGGGTKVEIK

>QNC41794.1 Sequence 311 from patent US 10654929
AREASWLPGSLDV

>QNC41793.1 Sequence 310 from patent US 10654929
WINPNSGGTKYAQKFQG

>QNC41792.1 Sequence 309 from patent US 10654929
YTFTGYYMH

>QNC41791.1 Sequence 308 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTGYYMHWVRQAPGQGLEWMGWINPNSGGTKYAQKFQGRVTM
TRDTSISTAYMELSRLRSDDTAVYYCAREASWLPGSLDVWGKGTTVTVSS

>QNC41790.1 Sequence 307 from patent US 10654929
QQAVNFPPIT

>QNC41789.1 Sequence 306 from patent US 10654929
AASSLQS

>QNC41788.1 Sequence 305 from patent US 10654929
RASQDISSWLA

>QNC41787.1 Sequence 304 from patent US 10654929
DIQLTQSPSSVSASVGDRVTITCRASQDISSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQAVNFPPITFGGGTKVEIK

>QNC41786.1 Sequence 303 from patent US 10654929
ARDPRYTTLTGSYYYGMDV

>QNC41785.1 Sequence 302 from patent US 10654929
IINPGGGSTSYAQKFQG

>QNC41784.1 Sequence 301 from patent US 10654929
YTFTSYYMH

>QNC41783.1 Sequence 300 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGLEWMGIINPGGGSTSYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARDPRYTTLTGSYYYGMDVWGQGTTVTVSS

>QNC41782.1 Sequence 299 from patent US 10654929
QQDGSFPYT

>QNC41781.1 Sequence 298 from patent US 10654929
KASSLES

>QNC41780.1 Sequence 297 from patent US 10654929
RASQSISSWLA

>QNC41779.1 Sequence 296 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYKASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQDGSFPYTFGGGTKVEIK

>QNC41778.1 Sequence 295 from patent US 10654929
ARAGGYSYSWGGSNI

>QNC41777.1 Sequence 294 from patent US 10654929
IINPSGGSTSYAQKFQG

>QNC41776.1 Sequence 293 from patent US 10654929
YTFTSYYMH

>QNC41775.1 Sequence 292 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGLEWMGIINPSGGSTSYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARAGGYSYSWGGSNIWGQGTMVTVSS

>QNC41774.1 Sequence 291 from patent US 10654929
QQGYALPIT

>QNC41773.1 Sequence 290 from patent US 10654929
DASNRAT

>QNC41772.1 Sequence 289 from patent US 10654929
RASQSVSSYLA

>QNC41771.1 Sequence 288 from patent US 10654929
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQGYALPITFGGGTKVEIK

>QNC41770.1 Sequence 287 from patent US 10654929
ARDGPGYSSSWYLDV

>QNC41769.1 Sequence 286 from patent US 10654929
GIIPIFGTASYAQKFQG

>QNC41768.1 Sequence 285 from patent US 10654929
GTFSSYAIS

>QNC41767.1 Sequence 284 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTASYAQKFQGRVTI

TADESTSTAYMELSSLRSEDTAVYYCARDGPGYSSSWYLDVWGQGTMVTVSS

>QNC41766.1 Sequence 283 from patent US 10654929
QQASDVPWT

>QNC41765.1 Sequence 282 from patent US 10654929
AASSLQS

>QNC41764.1 Sequence 281 from patent US 10654929
RASQGIDSWLA

>QNC41763.1 Sequence 280 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41762.1 Sequence 279 from patent US 10654929
AKVYYGMPY

>QNC41761.1 Sequence 278 from patent US 10654929
AISGSGGSTYYADSVKG

>QNC41760.1 Sequence 277 from patent US 10654929
FTFSSYAMS

>QNC41759.1 Sequence 276 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSSYAMSWVRQAPGKGLEWVSAISGSGGSTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41758.1 Sequence 275 from patent US 10654929
QQGYALPIT

>QNC41757.1 Sequence 274 from patent US 10654929
DASNRAT

>QNC41756.1 Sequence 273 from patent US 10654929
RASQSVSSYLA

>QNC41755.1 Sequence 272 from patent US 10654929
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQGYALPITFGGGTKVEIK

>QNC41754.1 Sequence 271 from patent US 10654929
ARDGPGYSSSWYLDV

>QNC41753.1 Sequence 270 from patent US 10654929
GIIPGFGVANYAQKFQG

>QNC41752.1 Sequence 269 from patent US 10654929

GTFDSYVIS

>QNC41751.1 Sequence 268 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGGTFDSYVISWVRQAPGQGLEWMGGIIPGFGVANYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARDGPGYSSSWYLDVWGQGTMVTVSS

>QNC41750.1 Sequence 267 from patent US 10654929
QQGYALPIT

>QNC41749.1 Sequence 266 from patent US 10654929
DASNRAT

>QNC41748.1 Sequence 265 from patent US 10654929
RASQSVSSYLA

>QNC41747.1 Sequence 264 from patent US 10654929
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQGYALPITFGGGTKVEIK

>QNC41746.1 Sequence 263 from patent US 10654929
ARDGPGYSSSWYLDV

>QNC41745.1 Sequence 262 from patent US 10654929
GIIPIFGTATYAQKFQG

>QNC41744.1 Sequence 261 from patent US 10654929
GTFSSSVIS

>QNC41743.1 Sequence 260 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSSVISWVRQAPGQGLEWMGGIIPIFGTATYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARDGPGYSSSWYLDVWGQGTMVTVSS

>QNC41742.1 Sequence 259 from patent US 10654929
QQGYALPIT

>QNC41741.1 Sequence 258 from patent US 10654929
DASNRAT

>QNC41740.1 Sequence 257 from patent US 10654929
RASQSVSSYLA

>QNC41739.1 Sequence 256 from patent US 10654929
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQGYALPITFGGGTKVEIK

>QNC41738.1 Sequence 255 from patent US 10654929
ARDGPGYSSSWYLDV

>QNC41737.1 Sequence 254 from patent US 10654929
GIIPIFGTAVYAQKFQG

>QNC41736.1 Sequence 253 from patent US 10654929
GTFSSYAIS

>QNC41735.1 Sequence 252 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGGIIPIFGTAVYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARDGPGYSSSWYLDVWGQGTMVTVSS

>QNC41734.1 Sequence 251 from patent US 10654929
QQGYALPIT

>QNC41733.1 Sequence 250 from patent US 10654929
DASNRAT

>QNC41732.1 Sequence 249 from patent US 10654929
RASQSVSSYLA

>QNC41731.1 Sequence 248 from patent US 10654929
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQGYALPITFGGGTKVEIK

>QNC41730.1 Sequence 247 from patent US 10654929
ARDGPGYSSSWYLDV

>QNC41729.1 Sequence 246 from patent US 10654929
GIIPIFGTAVYAQKFQG

>QNC41728.1 Sequence 245 from patent US 10654929
GTFSEYAIS

>QNC41727.1 Sequence 244 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSEYAISWVRQAPGQGLEWMGGIIPIFGTAVYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARDGPGYSSSWYLDVWGQGTMVTVSS

>QNC41726.1 Sequence 243 from patent US 10654929
QQGYALPIT

>QNC41725.1 Sequence 242 from patent US 10654929
DASNRAT

>QNC41724.1 Sequence 241 from patent US 10654929
RASQSVSSYLA

>QNC41723.1 Sequence 240 from patent US 10654929
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQGYALPITFGGGTKVEIK

>QNC41722.1 Sequence 239 from patent US 10654929
ARDGPGYSSSWYLDV

>QNC41721.1 Sequence 238 from patent US 10654929
GIIPLFGTAAYAQKFQG

>QNC41720.1 Sequence 237 from patent US 10654929
GTFGSSAIS

>QNC41719.1 Sequence 236 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFGSSAISWVRQAPGQGLEWMGGIIPLFGTAAYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARDGPGYSSSWYLDVWGQGTMVTVSS

>QNC41718.1 Sequence 235 from patent US 10654929
QQSYSLPFT

>QNC41717.1 Sequence 234 from patent US 10654929
WASTRES

>QNC41716.1 Sequence 233 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41715.1 Sequence 232 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQSYSLPFTFGGGTKVEIK

>QNC41714.1 Sequence 231 from patent US 10654929
ARGASDGETGRLDL

>QNC41713.1 Sequence 230 from patent US 10654929
LIIPIFGTAQYAQKFQG

>QNC41712.1 Sequence 229 from patent US 10654929
GTFGEYAIS

>QNC41711.1 Sequence 228 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFGEYAISWVRQAPGQGLEWMGLIIPIFGTAQYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARGASDGETGRLDLWGRGTLVTVSS

>QNC41710.1 Sequence 227 from patent US 10654929
QQSYSLPFT

>QNC41709.1 Sequence 226 from patent US 10654929
WASTRES

>QNC41708.1 Sequence 225 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41707.1 Sequence 224 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQSYSLPFTFGGGTKVEIK

>QNC41706.1 Sequence 223 from patent US 10654929
ARGASDGETGRLDL

>QNC41705.1 Sequence 222 from patent US 10654929
VIIPSFGTANYAQKFQG

>QNC41704.1 Sequence 221 from patent US 10654929
GTFSQYAIS

>QNC41703.1 Sequence 220 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSQYAISWVRQAPGQGLEWMGVIIPSFGTANYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARGASDGETGRLDLWGRGTLVTVSS

>QNC41702.1 Sequence 219 from patent US 10654929
QQSYSLPFT

>QNC41701.1 Sequence 218 from patent US 10654929
WASTRES

>QNC41700.1 Sequence 217 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41699.1 Sequence 216 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQSYSLPFTFGGGTKVEIK

>QNC41698.1 Sequence 215 from patent US 10654929
ARGASDGETGRLDL

>QNC41697.1 Sequence 214 from patent US 10654929
VIIPIFGTANYAQKFQG

>QNC41696.1 Sequence 213 from patent US 10654929
GTFGSYAIS

>QNC41695.1 Sequence 212 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFGSYAISWVRQAPGQGLEWMGVIIPIFGTANYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARGASDGETGRLDLWGRGTLVTVSS

>QNC41694.1 Sequence 211 from patent US 10654929
QQSYSLPFT

>QNC41693.1 Sequence 210 from patent US 10654929

WASTRES

>QNC41692.1 Sequence 209 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41691.1 Sequence 208 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQSYSLPFTFGGGTKVEIK

>QNC41690.1 Sequence 207 from patent US 10654929
ARGASDGETGRLDL

>QNC41689.1 Sequence 206 from patent US 10654929
VIIPIFGEANYAQKFQG

>QNC41688.1 Sequence 205 from patent US 10654929
GTFSSYAIS

>QNC41687.1 Sequence 204 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGVIIPIFGEANYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARGASDGETGRLDLWGRGTLVTVSS

>QNC41686.1 Sequence 203 from patent US 10654929
QQSYSLPFT

>QNC41685.1 Sequence 202 from patent US 10654929
WASTRES

>QNC41684.1 Sequence 201 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41683.1 Sequence 200 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQSYSLPFTFGGGTKVEIK

>QNC41682.1 Sequence 199 from patent US 10654929
ARGASDGETGRLDL

>QNC41681.1 Sequence 198 from patent US 10654929
LIIPAFGTANYAQKFQG

>QNC41680.1 Sequence 197 from patent US 10654929
GTFSSYAIS

>QNC41679.1 Sequence 196 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFSSYAISWVRQAPGQGLEWMGLIIPAFGTANYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARGASDGETGRLDLWGRGTLVTVSS

>QNC41678.1 Sequence 195 from patent US 10654929
QQSYSLPFT

>QNC41677.1 Sequence 194 from patent US 10654929
WASTRES

>QNC41676.1 Sequence 193 from patent US 10654929
KSSQSVLYSSNNKNYLA

>QNC41675.1 Sequence 192 from patent US 10654929
DIVMTQSPDSLAVSLGERATINCKSSQSVLYSSNNKNYLAWYQQKPGQPPKLLIYWASTRESGVPDRFSG
SGSGTDFTLTISSLQAEDVAVYYCQQSYSLPFTFGGGTKVEIK

>QNC41674.1 Sequence 191 from patent US 10654929
ARGASDGETGRLDL

>QNC41673.1 Sequence 190 from patent US 10654929
LIIPIFGTAQYAQKFQG

>QNC41672.1 Sequence 189 from patent US 10654929
GTFGEYAIS

>QNC41671.1 Sequence 188 from patent US 10654929
QVQLVQSGAEVKKPGSSVKVSCKASGGTFGEYAISWVRQAPGQGLEWMGLIIPIFGTAQYAQKFQGRVTI
TADESTSTAYMELSSLRSEDTAVYYCARGASDGETGRLDLWGRGTLVTVSS

>QNC41670.1 Sequence 187 from patent US 10654929
QQASDVPWT

>QNC41669.1 Sequence 186 from patent US 10654929
AASSLQS

>QNC41668.1 Sequence 185 from patent US 10654929
RASQGIDSWLA

>QNC41667.1 Sequence 184 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41666.1 Sequence 183 from patent US 10654929
AKVYYGMPY

>QNC41665.1 Sequence 182 from patent US 10654929
AISGSGGQTYYADSVKG

>QNC41664.1 Sequence 181 from patent US 10654929
FTFSLYAMS

>QNC41663.1 Sequence 180 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSLYAMSWVRQAPGKGLEWVSAISGSGGQTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41662.1 Sequence 179 from patent US 10654929
QQASDVPWT

>QNC41661.1 Sequence 178 from patent US 10654929
AASSLQS

>QNC41660.1 Sequence 177 from patent US 10654929
RASQGIDSWLA

>QNC41659.1 Sequence 176 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41658.1 Sequence 175 from patent US 10654929
AKVYYGMPY

>QNC41657.1 Sequence 174 from patent US 10654929
AISGGGGQTYYADSVKG

>QNC41656.1 Sequence 173 from patent US 10654929
FTFSQYSMS

>QNC41655.1 Sequence 172 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSQYSMSWVRQAPGKGLEWVSAISGGGGQTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41654.1 Sequence 171 from patent US 10654929
QQASDVPWT

>QNC41653.1 Sequence 170 from patent US 10654929
AASSLQS

>QNC41652.1 Sequence 169 from patent US 10654929
RASQGIDSWLA

>QNC41651.1 Sequence 168 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41650.1 Sequence 167 from patent US 10654929
AKVYYGMPY

>QNC41649.1 Sequence 166 from patent US 10654929
AISGSGGQTYYADSVKG

>QNC41648.1 Sequence 165 from patent US 10654929
FTFSHYLMS

>QNC41647.1 Sequence 164 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSHYLMSWVRQAPGKGLEWVSAISGSGGQTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41646.1 Sequence 163 from patent US 10654929
QQASDVPWT

>QNC41645.1 Sequence 162 from patent US 10654929
AASSLQS

>QNC41644.1 Sequence 161 from patent US 10654929
RASQGIDSWLA

>QNC41643.1 Sequence 160 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41642.1 Sequence 159 from patent US 10654929
AKVYYGMPY

>QNC41641.1 Sequence 158 from patent US 10654929
AISGSGSSTYYADSVKG

>QNC41640.1 Sequence 157 from patent US 10654929
FTFSSYLMS

>QNC41639.1 Sequence 156 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSSYLMSWVRQAPGKGLEWVSAISGSGSSTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41638.1 Sequence 155 from patent US 10654929
QQASDVPWT

>QNC41637.1 Sequence 154 from patent US 10654929
AASSLQS

>QNC41636.1 Sequence 153 from patent US 10654929
RASQGIDSWLA

>QNC41635.1 Sequence 152 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41634.1 Sequence 151 from patent US 10654929

AKVYYGMPY

>QNC41633.1 Sequence 150 from patent US 10654929
GISGSGGETYYADSVKG

>QNC41632.1 Sequence 149 from patent US 10654929
FTFSQYMMS

>QNC41631.1 Sequence 148 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSQYMMSWVRQAPGKGLEWVSGISGSGGETYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41630.1 Sequence 147 from patent US 10654929
QQASDVPWT

>QNC41629.1 Sequence 146 from patent US 10654929
AASSLQS

>QNC41628.1 Sequence 145 from patent US 10654929
RASQGIDSWLA

>QNC41627.1 Sequence 144 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41626.1 Sequence 143 from patent US 10654929
AKVYYGMPY

>QNC41625.1 Sequence 142 from patent US 10654929
AISGSGRDTYYADSVKG

>QNC41624.1 Sequence 141 from patent US 10654929
FTFRSYMMS

>QNC41623.1 Sequence 140 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFRSYMMSWVRQAPGKGLEWVSAISGSGRDTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41622.1 Sequence 139 from patent US 10654929
QQASDVPWT

>QNC41621.1 Sequence 138 from patent US 10654929
AASSLQS

>QNC41620.1 Sequence 137 from patent US 10654929
RASQGIDSWLA

>QNC41619.1 Sequence 136 from patent US 10654929

DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41618.1 Sequence 135 from patent US 10654929
AKVYYGMPY

>QNC41617.1 Sequence 134 from patent US 10654929
AIGGSGASTYYADSVKG

>QNC41616.1 Sequence 133 from patent US 10654929
FTFSQYLMS

>QNC41615.1 Sequence 132 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSQYLMSWVRQAPGKGLEWVSAIGGSGASTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41614.1 Sequence 131 from patent US 10654929
QQASDVPWT

>QNC41613.1 Sequence 130 from patent US 10654929
AASSLQS

>QNC41612.1 Sequence 129 from patent US 10654929
RASQGIDSWLA

>QNC41611.1 Sequence 128 from patent US 10654929
DIQMTQSPSSVSASVGDRVTITCRASQGIDSWLAWYQQKPGKAPKLLIYAASSLQSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQASDVPWTFGGGTKVEIK

>QNC41610.1 Sequence 127 from patent US 10654929
AKVYYGMPY

>QNC41609.1 Sequence 126 from patent US 10654929
AISGSGKSTYYADSVKG

>QNC41608.1 Sequence 125 from patent US 10654929
FTFSHYLMS

>QNC41607.1 Sequence 124 from patent US 10654929
EVQLLESGGGLVQPGGSLRLSCAASGFTFSHYLMSWVRQAPGKGLEWVSAISGSGKSTYYADSVKGRFTI
SRDNSKNTLYLQMNSLRAEDTAVYYCAKVYYGMPYWGQGTLVTVSS

>QNC41606.1 Sequence 123 from patent US 10654929
QQYNSFPPT

>QNC41605.1 Sequence 122 from patent US 10654929
EASSLES

>QNC41604.1 Sequence 121 from patent US 10654929
RASQSISSWLA

>QNC41603.1 Sequence 120 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41602.1 Sequence 119 from patent US 10654929
ARHEYGMDV

>QNC41601.1 Sequence 118 from patent US 10654929
IINPSGGSTSYAQKFQG

>QNC41600.1 Sequence 117 from patent US 10654929
YTFTSYYMS

>QNC41599.1 Sequence 116 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMSWVRQAPGQGLEWMGIINPSGGSTSYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARHEYGMDVWGQGTTVTVSS

>QNC41598.1 Sequence 115 from patent US 10654929
QQHNSYPPT

>QNC41597.1 Sequence 114 from patent US 10654929
EASSLES

>QNC41596.1 Sequence 113 from patent US 10654929
RASQSISSWLA

>QNC41595.1 Sequence 112 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQHNSYPPTFGGGTKVEIK

>QNC41594.1 Sequence 111 from patent US 10654929
ARDQGHYYGMGV

>QNC41593.1 Sequence 110 from patent US 10654929
IINPGGGSTSYAQKFQG

>QNC41592.1 Sequence 109 from patent US 10654929
YTFTSYYMH

>QNC41591.1 Sequence 108 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGLEWMGIINPGGGSTSYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARDQGHYYGMGVWGQGTTVTVSS

>QNC41590.1 Sequence 107 from patent US 10654929
QQYNSFPPT

>QNC41589.1 Sequence 106 from patent US 10654929
EASSLES

>QNC41588.1 Sequence 105 from patent US 10654929
RASQSISSWLA

>QNC41587.1 Sequence 104 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41586.1 Sequence 103 from patent US 10654929
ARHEYGMDV

>QNC41585.1 Sequence 102 from patent US 10654929
IINPAGGSTAYAQKFQG

>QNC41584.1 Sequence 101 from patent US 10654929
YTFASYYMG

>QNC41583.1 Sequence 100 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFASYYMGWVRQAPGQGLEWMGIINPAGGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARHEYGMDVWGQGTTVTVSS

>QNC41582.1 Sequence 99 from patent US 10654929
QQYNSFPPT

>QNC41581.1 Sequence 98 from patent US 10654929
EASSLES

>QNC41580.1 Sequence 97 from patent US 10654929
RASQSISSWLA

>QNC41579.1 Sequence 96 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41578.1 Sequence 95 from patent US 10654929
ARHEYGMDV

>QNC41577.1 Sequence 94 from patent US 10654929
IIFPGGGSTSYAQKFQG

>QNC41576.1 Sequence 93 from patent US 10654929
YTFASYAMS

>QNC41575.1 Sequence 92 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFASYAMSWVRQAPGQGLEWMGIIFPGGGSTSYAQKFQGRVTM

TRDTSTSTVYMELSSLRSEDTAVYYCARHEYGMDVWGQGTTVTVSS

>QNC41574.1 Sequence 91 from patent US 10654929
QQYNSFPPT

>QNC41573.1 Sequence 90 from patent US 10654929
EASSLES

>QNC41572.1 Sequence 89 from patent US 10654929
RASQSISSWLA

>QNC41571.1 Sequence 88 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41570.1 Sequence 87 from patent US 10654929
ARHEYGMDV

>QNC41569.1 Sequence 86 from patent US 10654929
MINPSVGSTAYAQKFQG

>QNC41568.1 Sequence 85 from patent US 10654929
YTFDSYYMS

>QNC41567.1 Sequence 84 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFDSYYMSWVRQAPGQGLEWMGMINPSVGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARHEYGMDVWGQGTTVTVSS

>QNC41566.1 Sequence 83 from patent US 10654929
QQYNSFPPT

>QNC41565.1 Sequence 82 from patent US 10654929
EASSLES

>QNC41564.1 Sequence 81 from patent US 10654929
RASQSISSWLA

>QNC41563.1 Sequence 80 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41562.1 Sequence 79 from patent US 10654929
ARHEYGMDV

>QNC41561.1 Sequence 78 from patent US 10654929
MINPEGGSTAYAQKFQG

>QNC41560.1 Sequence 77 from patent US 10654929

YTFTHYYMS

>QNC41559.1 Sequence 76 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTHYYMSWVRQAPGQGLEWMGMINPEGGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARHEYGMDVWGQGTTVTVSS

>QNC41558.1 Sequence 75 from patent US 10654929
QQYNSFPPT

>QNC41557.1 Sequence 74 from patent US 10654929
EASSLES

>QNC41556.1 Sequence 73 from patent US 10654929
RASQSISSWLA

>QNC41555.1 Sequence 72 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41554.1 Sequence 71 from patent US 10654929
ARHEYGMDV

>QNC41553.1 Sequence 70 from patent US 10654929
IIDPSKGSTAYAQKFQG

>QNC41552.1 Sequence 69 from patent US 10654929
YTFNSYYMS

>QNC41551.1 Sequence 68 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFNSYYMSWVRQAPGQGLEWMGIIDPSKGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARHEYGMDVWGQGTTVTVSS

>QNC41550.1 Sequence 67 from patent US 10654929
QQHNSYPPT

>QNC41549.1 Sequence 66 from patent US 10654929
EASSLES

>QNC41548.1 Sequence 65 from patent US 10654929
RASQSISSWLA

>QNC41547.1 Sequence 64 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQHNSYPPTFGGGTKVEIK

>QNC41546.1 Sequence 63 from patent US 10654929
ARDQGHYYGMGV

>QNC41545.1 Sequence 62 from patent US 10654929
IINPSAGSTGYAQKFQG

>QNC41544.1 Sequence 61 from patent US 10654929
YTFSDYYMH

>QNC41543.1 Sequence 60 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFSDYYMHWVRQAPGQGLEWMGIINPSAGSTGYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARDQGHYYGMGVWGQGTTVTVSS

>QNC41542.1 Sequence 59 from patent US 10654929
QQHNSYPPT

>QNC41541.1 Sequence 58 from patent US 10654929
EASSLES

>QNC41540.1 Sequence 57 from patent US 10654929
RASQSISSWLA

>QNC41539.1 Sequence 56 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQHNSYPPTFGGGTKVEIK

>QNC41538.1 Sequence 55 from patent US 10654929
ARDQGHYYGMGV

>QNC41537.1 Sequence 54 from patent US 10654929
IINPSEGSTGYAQKFQG

>QNC41536.1 Sequence 53 from patent US 10654929
YTFGEYYMH

>QNC41535.1 Sequence 52 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFGEYYMHWVRQAPGQGLEWMGIINPSEGSTGYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARDQGHYYGMGVWGQGTTVTVSS

>QNC41534.1 Sequence 51 from patent US 10654929
QQHNSYPPT

>QNC41533.1 Sequence 50 from patent US 10654929
EASSLES

>QNC41532.1 Sequence 49 from patent US 10654929
RASQSISSWLA

>QNC41531.1 Sequence 48 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQHNSYPPTFGGGTKVEIK

>QNC41530.1 Sequence 47 from patent US 10654929
ARDQGHYYGMGV

>QNC41529.1 Sequence 46 from patent US 10654929
IINPDAGSTAYAQKFQG

>QNC41528.1 Sequence 45 from patent US 10654929
YTFTSYYMH

>QNC41527.1 Sequence 44 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGLEWMGIINPDAGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARDQGHYYGMGVWGQGTTVTVSS

>QNC41526.1 Sequence 43 from patent US 10654929
QQYNSFPPT

>QNC41525.1 Sequence 42 from patent US 10654929
EASSLES

>QNC41524.1 Sequence 41 from patent US 10654929
RASQSISSWLA

>QNC41523.1 Sequence 40 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41522.1 Sequence 39 from patent US 10654929
ARGGTYYDYTY

>QNC41521.1 Sequence 38 from patent US 10654929
IINPSGGVTAYAQKFQG

>QNC41520.1 Sequence 37 from patent US 10654929
YTFESYYMH

>QNC41519.1 Sequence 36 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFESYYMHWVRQAPGQGLEWMGIINPSGGVTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARGGTYYDYTYWGQGTLVTVSS

>QNC41518.1 Sequence 35 from patent US 10654929
QQYNSFPPT

>QNC41517.1 Sequence 34 from patent US 10654929
EASSLES

>QNC41516.1 Sequence 33 from patent US 10654929
RASQSISSWLA

>QNC41515.1 Sequence 32 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41514.1 Sequence 31 from patent US 10654929
ARGGTYYDYTY

>QNC41513.1 Sequence 30 from patent US 10654929
IINPSGGVTAYAQKFQG

>QNC41512.1 Sequence 29 from patent US 10654929
YTFSDYYMH

>QNC41511.1 Sequence 28 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFSDYYMHWVRQAPGQGLEWMGIINPSGGVTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARGGTYYDYTYWGQGTLVTVSS

>QNC41510.1 Sequence 27 from patent US 10654929
QQYNSFPPT

>QNC41509.1 Sequence 26 from patent US 10654929
EASSLES

>QNC41508.1 Sequence 25 from patent US 10654929
RASQSISSWLA

>QNC41507.1 Sequence 24 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41506.1 Sequence 23 from patent US 10654929
ARGGTYYDYTY

>QNC41505.1 Sequence 22 from patent US 10654929
IINPEGGSTAYAQKFQG

>QNC41504.1 Sequence 21 from patent US 10654929
YTFPSYYMH

>QNC41503.1 Sequence 20 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFPSYYMHWVRQAPGQGLEWMGIINPEGGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARGGTYYDYTYWGQGTLVTVSS

>QNC41502.1 Sequence 19 from patent US 10654929
QQYNSFPPT

>QNC41501.1 Sequence 18 from patent US 10654929

EASSLES

>QNC41500.1 Sequence 17 from patent US 10654929
RASQSISSWLA

>QNC41499.1 Sequence 16 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41498.1 Sequence 15 from patent US 10654929
ARGGTYYDYTY

>QNC41497.1 Sequence 14 from patent US 10654929
IINPSGGSTAYAQKFQG

>QNC41496.1 Sequence 13 from patent US 10654929
YTFDQYYMH

>QNC41495.1 Sequence 12 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFDQYYMHWVRQAPGQGLEWMGIINPSGGSTAYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARGGTYYDYTYWGQGTLVTVSS

>QNC41494.1 Sequence 11 from patent US 10654929
QQYNSFPPT

>QNC41493.1 Sequence 10 from patent US 10654929
EASSLES

>QNC41492.1 Sequence 9 from patent US 10654929
RASQSISSWLA

>QNC41491.1 Sequence 8 from patent US 10654929
DIQMTQSPSTLSASVGDRVTITCRASQSISSWLAWYQQKPGKAPKLLIYEASSLESGVPSRFSGSGSGTE
FTLTISSLQPDDFATYYCQQYNSFPPTFGGGTKVEIK

>QNC41490.1 Sequence 7 from patent US 10654929
ARGGTYYDYTY

>QNC41489.1 Sequence 6 from patent US 10654929
IINPSGGSTSYAQKFQG

>QNC41488.1 Sequence 5 from patent US 10654929
YTFTSYYMH

>QNC41487.1 Sequence 4 from patent US 10654929
QVQLVQSGAEVKKPGASVKVSCKASGYTFTSYYMHWVRQAPGQGLEWMGIINPSGGSTSYAQKFQGRVTM
TRDTSTSTVYMELSSLRSEDTAVYYCARGGTYYDYTYWGQGTLVTVSS

>QNC41486.1 Sequence 3 from patent US 10654929
MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRM
SPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLK
EDPSAVPVFSVDYGELDFQWREKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPE
DGHCSWPL

>QNC41485.1 Sequence 2 from patent US 10654929
MWVRQVPWSFTWAVLQLSWQSGWLLEVPNGPWRSLTFYPAWLTVSEGANATFTCSLSNWSEDLMLNWNRL
SPSNQTEKQAAFCNGLSQPVQDARFQIIQLPNRHDFHMNILDTRRNDSGIYLCGAISLHPKAKIEESPGA
ELVVTERILETSTRYPSPSPKPEGRFQGMVIGIMSALVGIPVLLLLAWALAVFCSTSMSEARGAGSKDDT
LKEEPSAAPVPSVAYEELDFQGREKTPELPTACVHTEYATIVFTEGLGASAMGRRGSADGLQGPRPPRHE
DGHCSWPL

>QNC41484.1 Sequence 1 from patent US 10654929
MQIPQAPWPVVWAVLQLGWRPGWFLDSPDRPWNPPTFSPALLVVTEGDNATFTCSFSNTSESFVLNWYRM
SPSNQTDKLAAFPEDRSQPGQDCRFRVTQLPNGRDFHMSVVRARRNDSGTYLCGAISLAPKAQIKESLRA
ELRVTERRAEVPTAHPSPSPRPAGQFQTLVVGVVGGLLGSLVLLVWVLAVICSRAARGTIGARRTGQPLK
EDPSAVPVFSVDYGELDFQWREKTPEPPVPCVPEQTEYATIVFPSGMGTSSPARRGSADGPRSAQPLRPE
DGHCSWPL

>QNB72016.1 Sequence 18 from patent US 10647770
QQWSSNPFT

>QNB72015.1 Sequence 17 from patent US 10647770
DTSKLAS

>QNB72014.1 Sequence 16 from patent US 10647770
SASSSVSYMN

>QNB72013.1 Sequence 15 from patent US 10647770
YYDDHYCLDY

>QNB72012.1 Sequence 14 from patent US 10647770
YINPSRGYTNYNQKFKD

>QNB72011.1 Sequence 13 from patent US 10647770
RYTMH

>QNB72010.1 Sequence 12 from patent US 10647770
QIVLTQSPAIMSASPGEKVTMTCSASSSVSYMNWYQQKSGTSPKRWIYDTSKLASGVPAHFRGSGSGTSY
SLTISGMEAEDAATYYCQQWSSNPFTFGSGTKLEINR

>QNB72009.1 Sequence 11 from patent US 10647770
QVQLQQSGAELARPGASVKMSCKASGYTFTRYTMHWVKQRPGQGLEWIGYINPSRGYTNYNQKFKDKATL
TTDKSSSTAYMQLSSLTSEDSAVYYCARYYDDHYCLDYWGQGTTLTVSS

>QNB72008.1 Sequence 10 from patent US 10647770

QQSSNWPRT

>QNB72007.1 Sequence 9 from patent US 10647770
DASNRAT

>QNB72006.1 Sequence 8 from patent US 10647770
RASQSVSSYLA

>QNB72005.1 Sequence 7 from patent US 10647770
NDDY

>QNB72004.1 Sequence 6 from patent US 10647770
VIWYDGSKRYYADSVKG

>QNB72003.1 Sequence 5 from patent US 10647770
NSGMH

>QNB72002.1 Sequence 4 from patent US 10647770
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLIIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQRSNWPLTFGGGTKVEIK

>QNB72001.1 Sequence 3 from patent US 10647770
QVQLVESGGGVVQPGRSLRLDCKASGITFSNSGMHWVRQAPGKGLEWVAVIWYDGSKRYYADSVKGRFTI
SRDNSKNTLFLQMNSLRAEDTAVYYCATNDDYWGQGTLVTVSS

>QNB72000.1 Sequence 2 from patent US 10647770
DIQMTQSPASLSASVGETVTLTCRASENIHNYLAWYQQKQGKSPQLLVYNVKTLADGVPSRFSGSGSGTQ
YSLKINSLQPEDFGSYYCQHFWSSPWTFGGGTKLEIKR

>QNB71999.1 Sequence 1 from patent US 10647770
QVQLQESGPGLVKPSQSLSLTCTVTGHSITSDYAWNWIRQFPGDKLEWMGYISYSGYTTYNPSLKSRVSI
TRDTSKNQFFLQLNSVTTEDTATYFCARDLDYGPWFAYWGQGTTVTVSS

>QNB69654.1 Sequence 27 from patent US 10646567
DIQMTQSPSSLSASVGDRVTITCRASQDVSTAVAWYQQKPGKAPKLLIYSASFLYSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQYLYHPATFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFY
PREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFN
RGEC

>QNB69653.1 Sequence 26 from patent US 10646567
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDSWIHWVRQAPGKGLEWVAWISPYGGSTYYADSVKGRFTI
SADTSKNTAYLQMNSLRAEDTAVYYCARRHWPGGFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGT
AALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNT
KVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV
DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY
TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ
GNVFSCSVMHEALHNHYTQKSLSLSPGK

>QNB69652.1 Sequence 25 from patent US 10646567
WGQGTLVTVSS

>QNB69651.1 Sequence 24 from patent US 10646567
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDSWIHWVRQAPGKGLEWVAWISPYGGSTYYADSVKGRFTI
SADTSKNTAYLQMNSLRAEDTAVYYCARRHWPGGFDYWGQGTLVTVSS

>QNB69650.1 Sequence 23 from patent US 10646567
EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPGQAPRLLIYDASNRATGIPARFSGSGSGTD
FTLTISSLEPEDFAVYYCQQSSNWPRTFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFY
PREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFN
RGEC

>QNB69649.1 Sequence 22 from patent US 10646567
QVQLVESGGGVVQPGRSLRLDCKASGITFSNSGMHWVRQAPGKGLEWVAVIWYDGSKRYYADSVKGRFTI
SRDNSKNTLFLQMNSLRAEDTAVYYCATNDDYWGQGTLVTVSSASTKGPSVFPLAPCSRSTSESTAALGC
LVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTKTYTCNVDHKPSNTKVDKR
VESKYGPPCPPCPAPEFLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSQEDPEVQFNWYVDGVEVHNA
KTKPREEQFNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTISKAKGQPREPQVYTLPPSQEE
MTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSV
MHEALHNHYTQKSLSLSLGK

>QNB69648.1 Sequence 21 from patent US 10646567
DIQMTQSPSSLSASVGDRVTITCRASQDVSTAVAWYQQKPGKAPKLLIYSASFLYSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQYLYHPATFGQGTKVEIKR

>QNB69647.1 Sequence 20 from patent US 10646567
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDSWIHWVRQAPGKGLEWVAWISPYGGSTYYADSVKGRFTI
SADTSKNTAYLQMNSLRAEDTAVYYCARRHWPGGFDYWGQGTLVTVSA

>QNB69646.1 Sequence 19 from patent US 10646567
QQYLYHPAT

>QNB69645.1 Sequence 18 from patent US 10646567
SASFLYS

>QNB69644.1 Sequence 17 from patent US 10646567
RASQDVSTAVA

>QNB69643.1 Sequence 16 from patent US 10646567
AWISPYGGSTYYADSVKG

>QNB69642.1 Sequence 15 from patent US 10646567
GFTFSDSWIH

>QNB69641.1 Sequence 14 from patent US 10646567
FGQGTKVEIKR

>QNB69640.1 Sequence 13 from patent US 10646567
GVPSRFSGSGSGTDFTLTISSLQPEDFATYYC

>QNB69639.1 Sequence 12 from patent US 10646567
WYQQKPGKAPKLLIY

>QNB69638.1 Sequence 11 from patent US 10646567
DIQMTQSPSSLSASVGDRVTITC

>QNB69637.1 Sequence 10 from patent US 10646567
QQXXXXPXT

>QNB69636.1 Sequence 9 from patent US 10646567
SASXLXS

>QNB69635.1 Sequence 8 from patent US 10646567
RASQXXXTXXA

>QNB69634.1 Sequence 7 from patent US 10646567
WGQGTLVTVSA

>QNB69633.1 Sequence 6 from patent US 10646567
RFTISADTSKNTAYLQMNSLRAEDTAVYYCAR

>QNB69632.1 Sequence 5 from patent US 10646567
WVRQAPGKGLEWV

>QNB69631.1 Sequence 4 from patent US 10646567
EVQLVESGGGLVQPGGSLRLSCAAS

>QNB69630.1 Sequence 3 from patent US 10646567
RHWPGGFDY

>QNB69629.1 Sequence 2 from patent US 10646567
AWIXPYGGSXYYADSVKG

>QNB69628.1 Sequence 1 from patent US 10646567
GFTFSXSWIH

>QNA67462.1 Sequence 49 from patent US 10626174
DIQMTQSPSSLSASVGDRVTITCRASQDVSTAVAWYQQKPGKAPKLLIYSASFLYSGVPSRFSGSGSGTD
FTLTISSLQPEDFATYYCQQYLYHPATFGQGTKVEIKRTVAAPSVFIFPPSDEQLKSGTASVVCLLNNFY
PREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFN
RGEC

>QNA67461.1 Sequence 48 from patent US 10626174
EVQLVESGGGLVQPGGSLRLSCAASGFTFSDSWIHWVRQAPGKGLEWVAWISPYGGSTYYADSVKGRFTI
SADTSKNTAYLQMNSLRAEDTAVYYCARRHWPGGFDYWGQGTLVTVSSASTKGPSVFPLAPSSKSTSGGT

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AALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNT
KVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYV
DGVEVHNAKTKPREEQYASTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGQPREPQVY
TLPPSREEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRWQQ
GNVFSCSVMHEALHNHYTQKSLSLSPG

>QNA67460.1 Sequence 47 from patent US 10626174
WGQGTLVTVSSASTK

>QNA67459.1 Sequence 46 from patent US 10626174
FGQGTKVEIK

>QNA67458.1 Sequence 45 from patent US 10626174
WGQGTLVTVSS

>QNA67457.1 Sequence 44 from patent US 10626174
WVRQAPGKGLEWVA
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