

MRPS7

```
RMS7_DOG      1  MAAPAVKAAGGWPI LALS LRSVRR LPLGTQVRWSRYGPEYKDPRI DKEYYRKP LAELTE
RMS7_BOVINE  1  MAAPTAKVSRGWSGLALGVRIAVLR LPLGTQVRWSRYGPEYQDPQI DKEYYRKP LAQLTE
RMS7_HUMAN   1  MVAPAVKVARGWSGLALGVRRVAVLQ LPLGTQVRWSRYSPEFKDPLI DKEYYRKP VEELTE
RMS7_MOUSE   1  MAAPALRAPLRWSGLALGVRCVAVN LPLGTQVRGSRYPAPFREP LI DKEYYRKPVAELTE
RMS7_CHICKEN 1  MAAPTA-----AGLCPRLR---AWLPRLTQVRWSRYNPSFLEPEV NKELYQKPFNELSE
RS7_THET8    1  -----
RS7_ECOLI    1  -----
```

```
RMS7_DOG      61  EEKYEQELRKTQLI KAAPAAKTSSVFEDPVISKFTNMMMKGGNKVLARSLM QTLEAVKR
RMS7_BOVINE  61  EETVERELRKTQVI KAAPATKTSSVFEDPVISKFTNMMMKGGNKI LARSLMTQTLEAVKR
RMS7_HUMAN   61  EEKYVRELKKTQLI KAAPAGKTSSVFEDPVISKFTNMMMI GGKVLARSLMIQTLEAVKR
RMS7_MOUSE   61  EEKYDQELKKTQFI KAAAATETSSVFADPVISKFTNMMMKGGNKVLARSLMA QTLEAVKR
RMS7_CHICKEN 52  EEKEQELKAVHPI KAAPPSISSVFS DPMISKFTNMMMKDGNKVLARSLMA QTLENIKR
RS7_THET8    1  -----MARRRRAEVRQLQPDLYGDVLTAF INKIMRDGKKNLAA RIFYDACKIIQE
RS7_ECOLI    1  -----MPRRRVIQQRKILPDPKFGSELLAKFVNILMVDGKKSTAES I VYSALETLAQ
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```
RMS7_DOG      121 KQFEKYHAASAEQATIERNPYVIFHQALQNCPEVIGLVPILRGGHFYQVPVPLADRRRR
RMS7_BOVINE  121 KQFEKYHAASAEQATVERNPYTIIFHQALKNCEPVI GLVPI LKGGHFYQVPVPLAERRRR
RMS7_HUMAN   121 KQFEKYHAASAEQATIERNPYTIIFHQALKNCEPMI GLVPI LKGGRFYQVPVPLPDRRRR
RMS7_MOUSE   121 KQFEKYHAASAEQATIERNPYRIFHEALKNCEPVI GLVPI LKGGHFYQVPVPLADRRRR
RMS7_CHICKEN 112 KQFEKYHRAPDDEKERVE CNPYVIFHQALKNCOPI IGLSNITRGGKTYQVPVPLKDNKR
RS7_THET8    53  K-----TGQEP LKVFKA AVENVKPRMEVRSRRVGGANYQVPMEVSPRRQQ
RS7_ECOLI    53  R-----SGKSELEAF E VALENVRPTVEVKSRRVGGSTYQVPVEVRPVRN
```

```
RMS7_DOG      181 FLAMKWMITECREKKHRRMLMPEKLSHELLEAFHNQGPVIKKKDHMKMAEANRALAHYR
RMS7_BOVINE  181 FLAMKWMITECREKKPRRMLMPEKLSHELLEAF CNRGPVIKRKDHMKMAEANRALAHYR
RMS7_HUMAN   181 FLAMKWMITECRDKKHORTLMPEKLSHKLLEAFHNQGPVIKRKHD LHKMAEANRALAHYR
RMS7_MOUSE   181 FLAMKWMITECRENKPRRTLMPEKLSHELLEAFHN RGPVIKRKHNMHKMAEANRALAHYR
RMS7_CHICKEN 172 FLAMKWLITE-----
RS7_THET8    98  SLALRWLVQAANQRP ER--RAAVRIAHELMDAAEGKGGAVKKKEDV ERMAEANRAYAHYR
RS7_ECOLI    98  ALAMRWIVEAARKRGDK--SMALRLANELSDAAENKGTAVKKREDV HRMAEANKAFAHYR
```

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RMS7_DOG      241  WW-----
RMS7_BOVINE  241  W-----
RMS7_HUMAN   241  WW-----
RMS7_MOUSE   241  WW-----
RMS7_CHICKEN -----
RS7_THET8    156 W-----
RS7_ECOLI    156 WLSLRSFSHQAGASSKQPALGYLN
```

MRPS9

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RMS9_DOG      1  MAAPCVSCYAAALSCRLFLGGRVLSLQKQGVWKAASAEELQGTGSGQILRLRHHTTGVTSTKKN
RMS9_BOVINE   1  MAAPSVSCGAAPYRFLFLAGRVSFAREQGLWKAASGLQGTTRCQILRLKHSAPVTTKKN
RMS9_HUMAN    1  MAAPCVSYGGAVSYRLLWGRGSLARKQGLWKTAAPELQTNVRSQILRLRHHTAFVIPKKN
RMS9_MOUSE    1  -----
RMS9_CHICKEN  1  --MAVVAAGR----VLRLLGGR-----WSAAASG--GPSAQTLRLIYTTTAAWRKN
RS9_THET8     1  -----
RS9_ECOLI     1  -----

RMS9_DOG      61  VAALRREITYTDFIKKQIEEFNIGKRHLANMMGEDPETFTQEDIDKAIAYLFPSGLFEKQ
RMS9_BOVINE   61  VAALRRESYTVDFIKKQIEEFNIGKRHLANMMGEDPETFTQEDVDRAITTYLFPSGLFEKR
RMS9_HUMAN    61  VPTSREITYTEDFIKKQIEEFNIGKRHLANMMGEDPETFTQEDIDRAIAYLFPSGLFEKR
RMS9_MOUSE    1  -----GKRHLANMMGEDPETFAEEDIDRAIAYLFPSGLFEKR
RMS9_CHICKEN  43  VAASGPEKYTEAFIKKQIEEFDLIGKRHLANMMGEDPETFTQEDIDRAIAYLFPSGLFDKR
RS9_THET8     1  -----
RS9_ECOLI     1  -----

RMS9_DOG      121  ARPIMKHPEQIFPKQRAIQWGEDGRPFHFLFYTGKQAYYSMLMHEAYGKLVLEVEKRNQLQ
RMS9_BOVINE   121  ARPIMKHPEEIFPKQRAVQWGEDGRPFHFLFYTGKQSYYSMLMHEAYGKVLHAEERQDQLR
RMS9_HUMAN    121  ARPVMKHPEQIFPRQRAIQWGEDGRPFHYLFYTGKQSYYSMLMHDVYGMLLTLEKHQSHWQ
RMS9_MOUSE    38  ARPMMKHPEHIFPKQRAIQWGEDGRPFHFLFYTGKQSYYSMLMHDVYGKVMQLEKHR----
RMS9_CHICKEN  103  ARPMMKHPESEIFPEQRKIQWGEDGRPFHFLFYTGKQSYYSMLMHEITYEKLINVOQKHQDQLV
RS9_THET8     1  -----
RS9_ECOLI     1  -----

RMS9_DOG      181  AKGLFSEKTKT-KDLIDSRWLIKEELEEMLVKLSDDQYAFIRLLERLLTLHCGS-EEE
RMS9_BOVINE   181  AKGLFSEKSKS-KDLIGSRWLIKEELEEMLVKLSDDQYAFIRLLERLSALPCDAAEEE
RMS9_HUMAN    181  AKSLLEKIVT-RDVIQSRWLIKEELEEMLVGKLSDDLDMQFIRLLEKLLTSQCGAAEEE
RMS9_MOUSE    94  --GPIASAES-RDLIGSRWLIKEELEEMLVKLSDEQYAFIRLLEKLLTLPCGPAEEE
RMS9_CHICKEN  163  AQGFSLQKEK--KNLVGSRWLTKELEGLIEKLSDDDYSRFIRLLEKLLTLPCSDIEEN
RS9_THET8     1  -----
RS9_ECOLI     1  -----

RMS9_DOG      239  FVORFRRSVTIQSKKQIEPVOYDEQGMFSTSEGRKRSAKAEAVYGHGSGRIKVNQID
RMS9_BOVINE   240  FVGRFRRTVTVQSKKHLIEPVOYDEQGMFSTGGGRKTANAEAVVYGHGSGKIEINGVD
RMS9_HUMAN    240  FVORFRRSVTLESKKQIEPVOYDEQGMFSTSEGRKRTAKAEAVYKHHGSGRIKVNQID
RMS9_MOUSE    151  FVORFRRSVTIQSKKQIEPVOYDEQGMFSTSEGRKRSATAQAVVYEHGSGKIHVNGVD
RMS9_CHICKEN  221  YIKKFSKEIAVQLQKVVSTPELKYDEQGVAFSTGEGVRKTSRATAVVYDNGTGKITVNGID
RS9_THET8     1  -----MEQY-----YGTGRRKEAVARVFLR-PGNGKVTVNGQD
RS9_ECOLI     1  -----MAENQY-----YGTGRRKSSAARVFIK-PGNGKIVINQRS

RMS9_DOG      299  YLLYFPVITQDREQLMFPFHFVLDRLGKHDITCTVSGGGRSSQAGAIRLAVARALCSFVTEE
RMS9_BOVINE   300  YLLYFPVITQDREQLMFPFHFVLDRLGKHDVCTVSGGGRSSQAGAIRLAMSRALCSFITED
RMS9_HUMAN    300  YQLYFPVITQDREQLMFPFHFVLDRLGKHDVCTVSGGGRSSQAGAIRLAMAKALCSFVTE
RMS9_MOUSE    211  YLLYFPVITQDREQLMFPFHFVLDRLERHDVCTVSGGGRSSQAGAIRLAMARALCSFVTE
RMS9_CHICKEN  281  ILLRYFPVITQDREQLLFPFQFLDRVGGKDAICTVSGGGRSSQAGAIRLATAKALRSFVTE
RS9_THET8     33  FNEYFQGLVRAVAALPLRAVDALGHFDAYITVRGGGKSGQIDAIKLGIARALVQYN-PD
RS9_ECOLI     35  LEQYFGRETARMVVRQPLELVDMEKLDLYITVKGGGISGQAGAIRHGITRALMEYD-ES

RMS9_DOG      359  EVEWMRQAGLLTADPRVKERKKPGQEGARRKFTWKKR
RMS9_BOVINE   360  EVEWMRQAGLLTADPRVREKPKPGQEGARRKFTWKKR
RMS9_HUMAN    360  EVEWMRQAGLLTADPRVREKPKPGQEGARRKFTWKKR
RMS9_MOUSE    271  EVEWMRQAGLLTADPRVREKPKPGQEGARRKFTWKKR
RMS9_CHICKEN  341  EVEWMRQAGLLTADPRVREKPKPGQEGARRKFTWKKR
RS9_THET8     92  YRAKLRKPLGFLTRDARVVERKKYKHKHARRAPOYSKR
RS9_ECOLI     94  LRSELRKAGFVTRDARQVERKKVGLRKARRRPOFSKR
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MRPS11

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RMS11_DOG      1  MOVVRRTRSWLLRWVWAWSPTP-RVVAGAPASTVHAGARQLONQAAKQEAGEKAEAST--P
RMS11_BOVINE   1  MOVLRNAGSWLLRSWAWPPTT-RVVAGVPAPTIHMSAQOMQDAAAKEEV-EKAETPAPAP
RMS11_HUMAN    1  MQAVRNAGSRFLRSWTWPQTAGRVRVARTPAGTICTGARQLQDAAAKQKVEQNAA-----P
RMS11_MOUSE    1  MOVLRNSGSWLLLSWAGHGMT-RFVGIAPAKNIHTGAPRLEDSAAARQNTEREA-----P
RMS11_CHICKEN  1  MHAVLTV-----AWQRLRGAACGAGLGRGVHAGVRRLOELAEKG-AEKGAE-----
RS11_THET8     1  -----MAKKPS--KKKVKRQVASG-----
RS11_ECOLI     1  -----MAKAPIRARKRVRKQVSDG-----

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RMS11_DOG      58  SRSGFSIYPPVPGQESPLRWAGKKFEEIPIAHIKASYNNNTQIQVVSAAANOPLARTSCGTE
RMS11_BOVINE   59  SRSSFSIYPPVPGQESSLRWAGKKFEEIPIAHIKASYNNNTQIHVVSAAHQPLARASCGTE
RMS11_HUMAN    56  SHTKFSIYPPVPGFESSLRWAGKKFEEIPIAHIKASHNNTQIQVVSASNEPLAFASCGTE
RMS11_MOUSE    55  SR--FSLYPPVPGQESSLQWAGMKFEDVPIAHIKATYNNNTQIQVVSATNASLARASCGTE
RMS11_CHICKEN  46  SLSGTDLSPLLL-QRSSMRWDGKTYEEIPIAHIKATYNNNTHIQVVSFDNRPFAHTSCGTE
RS11_THET8     18  -----RAYIHASYNNNTIVTITDPDGNPITWSSGGVI
RS11_ECOLI     20  -----VAHIHASFNNNTIVTITDRQGNALGWATAGGS

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RMS11_DOG      118  GFRNAKKGTGIAAQTAGIAAAVKATGKGVTHIRVVVKGLGPGRLSAIKGLTMGGLEVISI
RMS11_BOVINE   119  GFRNAKKGTGIAAQTAGIAAAAKATGKGVTHVRVVVKGLGPGRLSAIKGLTMGGLEVISI
RMS11_HUMAN    116  GFRNAKKGTGIAAQTAGIAAAARAKQKGVTHIRVVVKGLGPGRLSAMHGLIMGGLEVISI
RMS11_MOUSE    113  GFRNAKKGTGIAAQTAGIAAAAKATGKGVTHIRVVVKGMGPGRWSAIKGLTMGGLEVISI
RMS11_CHICKEN  105  GFRNAKKGTGIAAQTAGIAAAVKARGKGVLHVRVMVKGLGPGRKAAIKGLTMGGLEVISI
RS11_THET8     49  GYKGSRKGTPTYAAQLAALDAAKKAMAYGMQSVQVIVRGTGAGREQAIRALQASGLQVKS I
RS11_ECOLI     51  GFRGSRKSTPFAAQVAERCA DAVKEYGIKNLEVMVKGP GPGRESTIRALNAAGFRITNI

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RMS11_DOG      178  TDNTPIPHNGCRPRKARRL--
RMS11_BOVINE   179  TDNTPIPHNGCRPRKARRL--
RMS11_HUMAN    176  TDNTPIPHNGCRPRKARKL--
RMS11_MOUSE    173  TDNTPVPHNGCRPRKARRL--
RMS11_CHICKEN  165  TDNTPVPHNGCRPRKARRM--
RS11_THET8     109  VDDTPVPHNGCRPKKFKRKAS
RS11_ECOLI     111  TDVTPIPHNGCRPKKRRV--

```

MRPS16

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RMS16_DOG      1  MVQLTPVLRKAYHGGHLTIRLALS GCTNR---PFYRIVA AHNKCPRDGRFVEQLGSYDPL
RMS16_BOVINE   1  MVQLTIVLCKAYRGGHLTIRLALGGCTNR---PFYRIVA AHNKCPRDGRFVEQLGSYDPM
RMS16_HUMAN    1  MVHLTITLCKAYRGGHLTIRLALGGCTNR---PFYRIVA AHNKCPRDGRFVEQLGSYDPL
RMS16_MOUSE    1  MVQLTITIFCKAYHGGHLTIRLALGGCTNR---PFYRIVA AHNKCPRDGRFVEQLGSYDPL
RMS16_CHICKEN  1  MVQLGSALLKGYRGGHVIRFALGGCTNR---PFYRIVA AHSKRARDGKYLEQLGCLDPL
RS16_THET8     1  -----MVKIRLARFGSKHNPHYPHYRIVVTDARRKRDKYIEKIGYYDPR
RS16_ECOLI     1  -----MVTIRLARHGAKKR---PFYQVVVADSRNARNGRFIERVGFNPI
  
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RMS16_DOG      58  PNSHGEKI VALNLERIRHWIGCGAHL SKPVERLLGLSGFFPLHPMITNAERLRRKRARE
RMS16_BOVINE   58  PNSHGEKL VALNLDRI RHWIGCGAHL SKPVEKLLGLSGFFPLHPMVI TNAERLRRKRAQE
RMS16_HUMAN    58  PNSHGEKL VALNLDRI RHWIGCGAHL SKPMEKLLGLAGFFPLHPMITNAERLRRKRARE
RMS16_MOUSE    58  PNSHGEKL VALNLDRI RHWIGCGAHL SKPMEKLLGLSGFFPLHPMITNAERLRRRRARE
RMS16_CHICKEN  58  PNAHGEKV AGLNLERIRHWIGCGA QLSRPAEKLLGLAGFLPLHPMTITNAERLRRRRRA
RS16_THET8     46  KTI P--DWL KVDVERARYWLSVGA QPTDTARRLLRQAGVFR-----QE
RS16_ECOLI     43  ASEK-EGTRLDLDRIA HWVGQGATISDRVAALI-----KE
  
```

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          *
RMS16_DOG      118  VLLASQKTDTEATETKTS--
RMS16_BOVINE   118  VLLAAQKTDTEATETKEN--
RMS16_HUMAN    118  VLLASQKTD AEA TDT EATET
RMS16_MOUSE    118  VLLASQKAESEAKETEAS--
RMS16_CHICKEN  118  QESDAPPAE GGSQEPSAAV-
RS16_THET8     87  AREGA-----
RS16_ECOLI     78  VNKAA-----
  
```

MRPS18-2

```
RMS18-2_DOG      1  MAASALRSWLRPI PGLSPFRSAYGVQVPLQTLCTKGPPEEDSLPPVPI SPYKNEPWKYLD
RMS18-2_BOVINE   1  MAASVLNVLLRRLPYFSPFRGAYGVQVPLQTLCTKAPPEDDSLPPIPVSPYEDEPWKYLD
RMS18-2_HUMAN    1  MAASVLNNTVLRRLPMLSLFRGSHRVQVPLQTLCTKAPSEEDSLSSVPI SPYKDEPWKYLE
RMS18-2_MOUSE    1  MAAPLRHTLLKLVPTLLRSSYVAQVPLQTLCTRGPPPEEDAPSSLVSPYSEEPWKYLD
RMS18-2_CHICKEN  1  -----MAAPSLLRGAFRRLFAGLWG
RS18_THET8       1  -----
RS18_ECOLI       1  -----

RMS18-2_DOG      61  SEEYQNRYS TRPVWADYRRNHKGGIPQQRTRKTCIRRDKVAGNCPICRD-HKLHVDFRN
RMS18-2_BOVINE   61  SEEYHNRYS TRPVWADYRRNHKGGIPQQRTRKMCIRGNKVAGNCPICRD-QKLHVDFRN
RMS18-2_HUMAN    61  SEEYQERYGSRPVWADYRRNHKGGVPPQQRTRKTCIRRNKVVGNCPICRD-HKLHVDFRN
RMS18-2_MOUSE    59  SEEYHNRYS TRPVWADYRRNHKGGVPPQQRTRKTCIRNNKVAGNCPICRD-HKLHVDFRN
RMS18-2_CHICKEN  21  SGWVSPPARTLREVVVTEGNTTIEGKIIEDTETPTPPNPSGQCPICRWNLKHKYDYVD
RS18_THET8       1  -----MSTKNAKPKKEAQRPSRK-----AKVKATLG-EFDLRDYRN
RS18_ECOLI       1  -----ARYFRRR-----KFCRFTAEGVQETDYKD

RMS18-2_DOG      120  VKLLEQFVCAHTGVIFHAPYTGVCMKQHKKLTQAIQKARDHGLLSYHIPQVEPRDLDFST
RMS18-2_BOVINE   120  VKLLKQFVCAHTGIIFHAPYTGVCMKQHKKLTQAIQKARDHGLLSYHIPQVEPRDLDFST
RMS18-2_HUMAN    120  VKLLEQFVCAHTGIIFHAPYTGVCVKQHKKLTQAIQKARDHGLLIYHIPQVEPRDLDFST
RMS18-2_MOUSE    118  VKLLEQFVCAHTGIIFHAPYTGVCMKQHKKLTQAIQKARECGLLSYVVPQVEPRDADFGT
RMS18-2_CHICKEN  81  VLLLSQFTRSDGGMLPRRITGLCLEEHKKAACVQMAHRAGLLPNHRPLLPESHVPRKP
RS18_THET8       37  VEVLKRFLESE-TGKILPRRRTGLSAKEQRILAKTIKRARILGLLPFTEKLVRK-----
RS18_ECOLI       25  IATLKNYITE-SGKIVPSRITGTRAKYQRLARAIKRARYLSLLPYTDRHQ-----
                                     *

RMS18-2_DOG      180  SHGAVSATPPAPTLVSGDPWYPWYSWKQPPERELSRRLRRLYQGHLEESGPPPEMPEVP
RMS18-2_BOVINE   180  SHGAVSATPPAPTLVSGDPWYPWYSWKQPPERELSRRLRRLYQGHLEESGPPPEMPEVP
RMS18-2_HUMAN    180  SHGAVSATPPAPTLVSGDPWYPWYNWQPPERELSRRLRRLYQGHLEESGPPPEMPEVP
RMS18-2_MOUSE    178  VHGAVSVTPPAPTLVSGEPWYPWYSWQPPERELSRRLRRLYQGNLLEESGPPPEMPEVP
RMS18-2_CHICKEN  140  KLNRYLTRWSVRSKAPIWKRGPKWCRVMPVGHLLKDNVYIHKPLYYNH-----
RS18_THET8       -----
RS18_ECOLI       -----

RMS18-2_DOG      240  LSSPTSSSTEES-POSAL
RMS18-2_BOVINE   240  LTAPTTEATSTEQAGPOSAL
RMS18-2_HUMAN    240  PRTPAEASSTGQTGPSAL
RMS18-2_MOUSE    238  TTPPAES-SIEQPGSOSA-
RMS18-2_CHICKEN  -----
RS18_THET8       -----
RS18_ECOLI       -----
```

MRPS23

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RMS23_DOG      1  MARSRLQTVGSIKSRTRDLIRAGVLKEKPLWFDVYDAFPPLREPVFRRPRLRYGKAKAAI
RMS23_BOVINE   1  MAGSRLQTVGSIKSRTRDLIRAGVLKEKPLWFDVYNAFPPLREPVFRRPRLRYGKAKSPT
RMS23_HUMAN    1  MAGSRLQTVGSIKSRTRDLIRAGVLKEKPLWFDVYDAFPPLREPVFQRPRLRYGKAKAPI
RMS23_MOUSE    1  MAGSRLQTVGSIKSRTRDLIRAGVLKEKPLWYDIYKAFPPLREPVFRRPRLRYGKAKADI
RMS23_CHICKEN  1  MAGSRMQKTGSVFSRTRNLLRIGVITQ-KPLWFDVYATFPPLREPLYRVPRPRYGKVTDDV
  
```

```

RMS23_DOG      61  QDILYPEDRIIRAKFYSAIYSGGQKAFDLFNPFPKSTCQFVEKYIIELOKLGGETDEEKLQVE
RMS23_BOVINE   61  QDIFYHEDQIRAKFYAAIYSGGPKAFDLFNPFPKSTCQRFVEKYIIELOKLGGETDEEKLQVE
RMS23_HUMAN    61  QDIWYHEDRIIRAKFYSVIYSGGQAFDLFNPFPKSTCQRFVEKYIIELOKLGGETDEEKLQVE
RMS23_MOUSE    61  QDIFYQEDQIRAKFYATYSGGQKAFDLFDPNFKSTCQRFVEKYIIELOKLGGETDEEKLQVE
RMS23_CHICKEN  60  PPIFYREDEVRAKFYRIYSGGPKPFDLSPNYKSTCQRFVEKYIIELOKLGGETDEEKLQVE
  
```

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RMS23_DOG      121  TGKALLAEGVILRRVGEARTHKEGSH-VSWKSEPKDAEPQTVLEKKQPLQEV PQDQNSEA
RMS23_BOVINE   121  AGKALLAEGVILRRVEKARTQQEGSQ-VSRKSESMGVESQTALEENPPLKEV PQAQHLES
RMS23_HUMAN    121  TGKALLAEGVILRRVGEQGLNTEVVVTFPGNPNT-----
RMS23_MOUSE    121  TGKALLAEGVILRRVREARTVSVRLQ-ASSEGHE-----PQEDDDLAQRGQV
RMS23_CHICKEN  120  TGKALLASGIILORRGTDKVAQQDHQDAEARDSVLRLQLQTVLEELQEKKE SQEEQMPEL
  
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RMS23_DOG      180  SEEQSKGLSPP
RMS23_BOVINE   180  PGEESKGLSPP
RMS23_HUMAN    -----
RMS23_MOUSE    167  KQEPETAPSPP
RMS23_CHICKEN  180  RETQKENPSS-
  
```

MRPS29

RMS29_DOG 1 -MLRRMTRLISGARQLDPGRFLHRGSPAPOS LDAHLDDQRP----RAVSC TSEDDPARHG
RMS29_BOVINE 1 -MLKGMTRLVSRVHKLDPGRFSLHIGTQAPQCPVAHLDNQVPTERTRAISRTLENDPAKHG
RMS29_HUMAN 1 MMLKGITRLISRIHKLDPGRFLHMGTOARQSIAAHLDNQVPVESPRAISRTNENDPAKHG
RMS29_MOUSE 1 -MLTGTITRLFSRVOKLDPKRCFLHMSVQATQ-----NSOVPAERPRTVSRTSDSDPAKHG
RMS29_CHICKEN 1 -MLRSVKGFTCRPLKLDHGALHTAAKDCFS SVVSQDVQTPAEKPRAIFYTNESDPAQHS

RMS29_DOG 56 EQHAALHYHIPLQDLKTVFPQGLPPRFIMQVKTFNEACL MVRKPALELLHYLKNTNFAHP
RMS29_BOVINE 60 EQHVGQHYNISIQELKTVFPHGLPPRFVMQVKTFNEACL MVRKPALELLHYLKNTNFAHP
RMS29_HUMAN 61 DQHEGQHYNISIPQDLKTVFPHGLPPRFVMQVKTFSEACL MVRKPALELLHYLKNTSFAYP
RMS29_MOUSE 54 EQHEGQHYSIPLQDLKTVFPHGLPPRYMMQVKTFGEACL MVRKPALELLGYLKNTNFAHP
RMS29_CHICKEN 60 EQHEGRHYSIPLEEVKAVFPHGLPYRFQQI KTFQEACVMVRKPALELFTYLKNSNFAHP

RMS29_DOG 116 AVRYVLY-----GEKGTGKTL SLCHVVHFCAKQDWLILHIPD
RMS29_BOVINE 120 AVRYVLY-----GEKGTGKTL SLCHITHFCAKQDWLILHIPD
RMS29_HUMAN 121 ATRYILY-----GEKGTGKTL SLCHVITHFCAKQDWLILHIPD
RMS29_MOUSE 114 AVRYVLY-----GEKGTGKTL SLCHAVHFCARHDWLILHIPD
RMS29_CHICKEN 120 VVRYVVICIFCLSAWWWNTDGMQAGEYRVGD GERGTGKTMILCHVVHFCARQGWLVLHIPD

RMS29_DOG 153 AHLWVKNCRGLLOSSYNKQRFDPVEAS IWLKNFKTANERFLSQIKVQEKYVWNKRESTE
RMS29_BOVINE 157 AHLWVKNCRDLLQSTYNKQRFDPLEAS IWLKNFKTANERFLSQIKVQDKYIWNKRESTE
RMS29_HUMAN 158 AHLWVKNCRDLLQSSYNKQRFDPLEASTWLKNFKTTNERFLN QIKVQEKYVWNKRESTE
RMS29_MOUSE 151 AHLWVKNCRELLQSTHNKQRFDPLEASTWLKNFKTTNERFLSQIKVQEKYVWNKRESTE
RMS29_CHICKEN 180 AHLWVKNCKELMQSSYNKERLDQPLQASF WLRNFRITTNEHFLKEIKTQQKYVWVKRDSTE

RMS29_DOG 213 KGSPLGAVVEQGLTRVRNATDAVGIVLKEKLNQSC LGAFHLLVAVDGVNALWGRTSLKRE
RMS29_BOVINE 217 KGSPLAEVVEQGITRVRNATDAVGIVLKEKLRQSS LGVFRLLVAVDGVNALWGRTTLKRE
RMS29_HUMAN 218 KGSPLGEVVEQGITRVRNATDAVGIVLKEKLRQSS LGMFHLLVAVDGINALWGRTTLKRE
RMS29_MOUSE 211 KGSPLGEVVEQGLTRVRNATDAVGIVLKEKKAQSALGLFHLLVAVDGVNALWGRTTLKKE
RMS29_CHICKEN 240 QGRPLGEVVEQGLTRVKNASDAVGIVLKEIKQCC LGSFRVLVAVDGVNALWGRTTLKKE

RMS29_DOG 273 DKSLTIAPEELALVCSLRK MVRNDWHGGAI VLTLSQ TGSFLFKPRKAYLPQELLGKEGFDAL
RMS29_BOVINE 277 DKSPITPEELALTYNLRK MVKNDWQGGAI VLTLSQ TGSFLFKPRKAYLPQELLGKEGFDITL
RMS29_HUMAN 278 DKSPITAPEELALVHNL RKMVKNDWHGGAI VSALSQTGSFLFKPRKAYLPQELLGKEGFDAL
RMS29_MOUSE 271 DRTLTIAPEELS LVHNL RKMVKNDWHGGAI VLSLSQTGSFLFKSRTAYLPHELLGKEGFNAL
RMS29_CHICKEN 300 DKSPVSPPEELTLVYNLRK MVMNNSG GAVVITLSQTGSFLFKPSSAHLPHELLGKEGFDAL

RMS29_DOG 333 DPFIPILVSNYNPKEFESCIOYYLENKWLQHEKAHTEEGK KELLFLSDANPGQLERLCAY
RMS29_BOVINE 337 DPFIPILVSNYNPKEFEGC IOYYLENNWLQHEKAHTEEGK KELLFLSNRNPGLLERLCAY
RMS29_HUMAN 338 DPFIPILVSNYNPKEFESCIOYYLENNWLQHEKAPTEEGK KELLFLSNANPSSLERHCAY
RMS29_MOUSE 331 EPFIPILIPNYPNPKEFESSFOYYLENNWLQHEKASTE EGRKELRFLSNCNPEQLERLCAS
RMS29_CHICKEN 360 DPFVPILVPNYTEREFESC YHYLHCRWLQHEKARTEDGKEELRFLSGCNPWQLERLSAP

RMS29_DOG 393 L
RMS29_BOVINE 397 L
RMS29_HUMAN 398 L
RMS29_MOUSE 391 L
RMS29_CHICKEN 420 L

MRPL1

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RML1_DOG      1  MVNMAAAM-KCVGRVLIHHQKHSLSKKVYQIPLYPCSVYVQVSSRHFAA----TKPAKK
RML1_BOVINE   1  ---MAATV-RCFGRVLIHHQRCSLATVTSQTSLYPCCIYVPVFNHRFAA----AKPAKK
RML1_HUMAN    1  -----MVTQTSLCSQSVNIRVFNHRFAA----TKSAKK
RML1_MOUSE    1  ---MAAAV-RCLRRVLIHHQRHCLCKMASQASLYPCSVNSLLHNRFAAAAAAATKPAKK
RML1_CHICKEN  1  ---MAAPAGLLLRVLTPCRRAWLP--GLQQRPAAPLSAAPPARLYAAA----AKNAKR
RL1_THET8     1  -----PKHGKR
RL1_ECOLI     1  -----MAKLTKR

RML1_DOG      56  TKKSMKDKAS-----DEK-KDEIEKIKSYSPFMEGEPEDDVYLKHLYPRQIYEVEKAIQ
RML1_BOVINE   53  TKKGTKEKAS-----NEK-KDDIEKIKSYSPFMEGEPEDDVYLKRLYPRQIYEVEKAVN
RML1_HUMAN    31  TKKGAKKTP-----DEK-KDEIEKIKAPYMEGEPEDDVYLKRLYPRQIYEVEKAVH
RML1_MOUSE    57  IKKGAKKTS-----DEKPVDDIEKIKSYTYMESDPEDDVYLKRLYPRRIYEVEKAIH
RML1_CHICKEN  52  DSQAKKQEE-----QK-----KKGRRRPLLSKPVDDVYLTWYKRPVSYNVEEAVG
RL1_THET8     7  YR-----ALLEKVDPNKIYTIIDEAAH
RL1_ECOLI     8  MR-----VIREKVDATKQYDINEAIA

RML1_DOG      108  LLKKFQTLDFTNPKQGVYLDLTLDMSLGKKKKVEPFASVLSFPYPISEINKVAVLTENA
RML1_BOVINE   105  LLKKFOVLDFTNPKQGVYLDLTLDMTLGKKKKVEPFASVLSLPYPISEM SKVAVFTGNA
RML1_HUMAN    83  LLKKFOILDFTSQKOSVYLDLTLDMALGKKKNVEPFTSVLSLPYPISEINKVAVFTENA
RML1_MOUSE    110  LLKKFOVLDFTNPKQGVYLDLTLDMALGKKKTVEPFASVIALPHLFSSEVNKAVFTANA
RML1_CHICKEN  99  MLKKFOELDFTYPKQFVYINVTLDMELPKKKKVDQFASIVLLPYRFTDET NKVLVFTENE
RL1_THET8     28  LVKELATAKFDET-----VEVHAKLGIDPRRSDQNVRGTVSLPHGLG-KQVRVLAIAKGE
RL1_ECOLI     29  LLKELATAKFVES-----VDVAVNLGIDARKSDQNVRGATVLPHGTVG-RSVRVAVFTQGA

RML1_DOG      168  SEIKIAEENGAAGGTNLIQKILDDEIQSDFYVAVPEIMPELN-PLKKLKKR--FPKL
RML1_BOVINE   165  SDIKIAEENGAAGGTNLIQKILDDEIQADFYIAVPEIMPELN-PLRKKLKR--FPKF
RML1_HUMAN    143  SEVKIAEENGAAGGTSLIQKIWDDEIVADFYVAVPEIMPELN-RLRKKLNKK--YPKL
RML1_MOUSE    170  SEIKIAEENGAAGGTDLVKKIMDDEVVDFYVAVPEIMPELN-PLRKKLKKR--FPKA
RML1_CHICKEN  159  QEAEIARENGAAVGGVELIKWILDEIQMDFYIAVPAIIPKLI-PLRNKLRK--YPSI
RL1_THETH     82  -KIKEAEEAGADVGGEEIIQKILDGWMDFDAVVATPDVVGAVGSKLGRILGPRGLLPNP
RL1_ECOLI     83  -NAEAAKAAAGAEVGMEDLADQIKKGMNFDVVIASPDAMRVVG-QLGQVLGPRGLMPNP

RML1_DOG      225  TRNSIGRDIPKMLELFKTGHEIKVDEERENFLETKIATLDMQSDQIAANLQAVISEVCKH
RML1_BOVINE   222  NRNSVGRDIPKMLELFKTGLEIKVDEERENFLETKIATLDMPSDQIAANLQAVINEVCRQ
RML1_HUMAN    200  SRNSIGRDIPKMLELFKNGHEIKVDEERENFLQTKIATLDMSSDQIAANLQAVINEVCRH
RML1_MOUSE    227  TRNSIGRDIPKMLELFKTAHEIMVDEERQNFLETKIATLDMPSDQIAANLQAVINEVCKH
RML1_CHICKEN  216  RRNSLGHIDIPKMLQFFREGLEYTVQDER--LIKTRIARLDMPTEQIVANLKTIIEDICKF
RL1_THET8     141  KAGTVGFNIGETIREIKAG-RIEFRNDKTGAIHAPVKGASFPEKPADNIRAFIRALEAH
RL1_ECOLI     141  KVGIVTPNVAAEVKNAKAG-QVRYRNDKNGIHTTTIGKVDFDADKIKENLEALIVAKKA

RML1_DOG      285  RPL-NLGPVVRAFRLRSTSEGLLLKIKPLLPKEVETEESENKEDA-----
RML1_BOVINE   282  RPL-NLGPVVRAFRLRSSTSEGLLLKIEPLLPKEGETKESDKKAV-----
RML1_HUMAN    260  RPL-NLGPVVRAFRLRSSTSEGLLLKIDPLLPKEVKNEESEKEDA-----
RML1_MOUSE    287  RPL-NLGPVVRAFRLRSSTSEGLLLKTDSELLPKEAKTTEAETEETQTAEAA-----
RML1_CHICKEN  274  KPS-SAGPFVKKLVIRRSSTSEGLLLNLDGLLPEAEKVEEKEEPEAEDDDEEKPVQESIST
RL1_THET8     200  KPEGAKGTFILRSVYVTTTGMGPSVRINPHS-----
RL1_ECOLI     200  KPTQAKGVYIKKVSISTTGMGAGVAVDQAGLSASVN-----
```


MRPL2

RML2_DOG 1 MALRALTRALGSLSLTPPAAAALGPGLLPAAQVTSSTLLQLPSSSVLIPCRPVLTSSVALN **
RML2_BOVINE 1 MALRVVTRALGSLSLTPRIAAVPGPSLLPAAQVTNNVLLQLPSASMLLPSRPLLTSSVALS
RML2_HUMAN 1 MALCALTRALLVNLAPPTVAAPAPSLFPAAQMMNGLLQOPSSALMLLPCRVLTSVALN
RML2_MOUSE 1 MALCALTSALRSLSLASAAITARVPTLLPAAQIQSNVLLQLPPALVSPSYRPVHMSADRS
RML2_CHICKEN 1 AARGALAAAWRGLCGSAPRCTTDP-----
RL2_THET8 1 -AVKFKPYTPSRRFMTVADFS-----
RL2_ECOLI 1 MAVVKCKPTSPGRRHVVKVVPN-----

RML2_DOG 61 ANVVSWKSRTKYTIIPVKMRKSGGRNHTGRIQVHGIGGGHKQRYRMIDFLFRPELETKP
RML2_BOVINE 61 AKFVSWKSRTKYTIIPVKMRKSGGRNHTGRIQVHGIGGGHKQRYRMIDFLFRPEQESKP
RML2_HUMAN 61 ANFVSWKSRTKYTIIPVKMRKSGGRDHTGRIQVHGIGGGHKQRYRMIDFLFRPE-ETKS
RML2_MOUSE 61 AKFVSWKSRTKYTIIPVKMRKSGGRDHTGRIQVHGIGGGHKQRYRMIDFLFRPEKEKAP
RML2_CHICKEN 25 ----MWKCRVKYTVRPVGMKKTGGRDHTGRIQVHGIGGGHKRRYRMIDFORLRYNEGTL--
RL2_THET8 22 ----EITKTEPEKSLVKPLKKTGGRNNOGRITVRFVGGGKRLRYRIDFKRWDKVG----
RL2_ECOLI 23 ----ELHKGKPEAPLLEKNSKSGGRNNGRITTRHIGGGHKQAYRIVDFKR-NKDG----

RML2_DOG 121 GPFEKVIMVRYDPCRSADIALVAG-GSRKRWIATENMQAGDIILNSDHIIGRMAVAARE *
RML2_BOVINE 121 GPFEKVIVVRYDPCRSADIALVAG-GNRKRWIATENMKAGDTILNSDHIIGRMAVAARE
RML2_HUMAN 120 GPFEKVIVRYDPCRSADIALVAG-GSRKRWIATENMQAGDTILNSNHIGRMAVAARE
RML2_MOUSE 121 EPFEKVIVVRYDPCRSADIALVAG-GSRKRWIATENMKAGDTILNSNHIGRMAVAQAE
RML2_CHICKEN 79 ----EKVIIVRYDPCRSADIALVAG-GNQRWIATENMQPGDLIKNSSHIGRMAVLANE
RL2_THET8 74 --IPAKVAAIEYDPNRSARIALLHYVDGEKRYIIAPDGLQVGGQVAVAG-----PDAPIQV
RL2_ECOLI 74 --IPAVVERIEYDPNRSANIALVLYKDGERRYILAPKGLKAGDQIQSG-----VDAAIKP

RML2_DOG 180 GDAHPLGALPVGTLINNVESEPGRGAQYIRAAGTCGVLLRKVNGTAI IQLP SKRQMQVLE * *
RML2_BOVINE 180 GDAHPLGALPVGTLINNVESEPGRGAQYIRAAGTCGVLLRKVNGTAI IQLP SKRQMQVLE
RML2_HUMAN 179 GDAHPLGALPVGTLINNVESEPGRGAQYIRAAGTCGVLLRKVNGHSI IQLP SKRQMQVLE
RML2_MOUSE 180 GDAHPLGALPVGTLINNVESEPGRGAQYIRAAGTCGVLLRKVNGTAI IQLP SKRQMQVLE
RML2_CHICKEN 134 GDAVPLGALPVGTLICNLESHPGKGAQYIRAAGTCGVLLRKVNGTAVIQLP SKRHMQVLE
RL2_THET8 127 GNALPLRFIPVGTIVHVALELPKKGAKLARAAGTSAQIQGREGDYVILRLRPSGELRKYVHG
RL2_ECOLI 127 GNTLPLMRNIPVGTIVHNVEMKPGKGGQLARSAGTYVQIVARDGAYVTLRLRSGEMRKYVEA

RML2_DOG 240 TCMATVGRVSNVDHNKRVIKAGRNRLGKRPSSG-----LWHRKGG * *
RML2_BOVINE 240 TCTATVGRVSNVDHNKRVIKAGRNRLGKRPNSSG-----RWHKGG
RML2_HUMAN 239 TCMATVGRVSNVDHNKRVIKAGRNRLGKRPNSSG-----GGTARGAGLPKDSATTPHE
RML2_MOUSE 240 SCTATVGRVSNVNHNRVIGKAGRNRLGKRPNSSG-----LWQRKGG
RML2_CHICKEN 194 TCVATVGRVSNVDHNKRVIKAGRNRLGKRPHITG-----LWHRKGG
RL2_THET8 187 ECVATVGAIGNADHNKNTVIGKAGRSRWLGRPHVVRGAAMNPVDHPPHGG
RL2_ECOLI 187 DCRATLGEVGNALHMLRVLGKAGARWRGVRPTVVRGTAMNPVDHPPHGG

RML2_DOG 282 -----WAGRKIRPLPPMKSYVKLPS-----AAAQN
RML2_BOVINE 282 -----WAGRKIRPLPPMKSYVKLPS-----AAAQN
RML2_HUMAN 293 ELREAAFCFCPKLISLYSNKMPNVLICYCGFVLGVFCFFCCFFCFAGEGMVQTKRGEK
RML2_MOUSE 282 -----WAGRKIRPLPPMKSYVKLPS-----AAAQN
RML2_CHICKEN 236 -----WAGRKIRPLPPMKSYVNLPRITN-----TAVRARANKHSARR
RL2_THET8 235 -----GEGRAPRGRPPASPWGQTKGLK-----TRKRRKPSSRFIIAR
RL2_ECOLI 235 -----GEGRN-FGKHPVTPWVQTKGKK-----TRSNKR-TDKFIVRR

RML2_DOG -----
RML2_BOVINE -----
RML2_HUMAN 353 K-----
RML2_MOUSE -----
RML2_CHICKEN 273 QK--
RL2_THET8 273 RKK--
RL2_ECOLI 271 RSK--

MRPL3

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                *           *
RML3_DOG      1  MSGWRLLAQAGAOVLGCSAGG---PGAARGSANRTDIWLLVRS LHGRSGTWWDEHLSEEN
RML3_BOVINE   1  MPGWRLLAWAGARVLDRTGG---LGTALGSGNRTDICVLLVRS LHGKSGTWWDEHLSEEN
RML3_HUMAN    1  MPGWRLLTQVGAOVLGRLGDG---LGAALGPGNRTHIWLFFVRGLHGKSGTWWDEHLSEEN
RML3_MOUSE    1  MPGWRLLAQAGARVLCGGARG---LGADPGLERRKNILFFVRNLHKSSTWWDEHLSEEN
RML3_CHICKEN  1  MAGWGLLARLGARLRAAAASGGPLRAVAVS GHSWQLGFAARPVH--DATWWHEHLSEEN
RL3_THET8     1  -----
RL3_ECOLI     1  -----
```

```
RML3_DOG      58  VTFVKQLASDENKAQLASKLCPLKDEPWPIHPWEPGSSRVGLIALKLGMMPLWTKDGKRH
RML3_BOVINE   58  VSFVKQLVSDENKAQLASKLCPLKDEPWPIHPWEPGSSRVGLVALKLGMMPLWTKDGKHH
RML3_HUMAN    58  VPFVKQLVSDENKAQLASKLCPLKDEPWPIHPWEPGSSRVGLIALKLGMMPLWTKDGQKH
RML3_MOUSE    58  LSFVKQLVSDENKTQLTSKLNPLKDEPWPIHPWEPGSSRVGLIALKLGMMPLWTKDGQKH
RML3_CHICKEN  59  VQFLRKAATFEYRAQTASKLCPLKDEPWPINEWKPDSSRVGVVAVKLGMMPIWTKSGKHH
RL3_THET8     1  -----MKGILGVKVMTRIFRDD-RAV
RL3_ECOLI     1  -----MIGLVGKVMTRIFTEDGVSI
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RML3_DOG      118 VVTLLOVQDCHVLKYTPKENHNGKMAALT VGGKTVSRFHKSTSVLEFYQELGLPPKQKVK
RML3_BOVINE   118 VVTLLOVQDCHVLKYTPKENHNGKMAALT VGGKTVSRFHKSTSVLEFYQELGLPPKQKIK
RML3_HUMAN    118 VVTLLOVQDCHVLKYTSKENCNGKMATL SVGGKTVSRFRKATSVLEFYRELGLPPKQTVK
RML3_MOUSE    118 AVTLLOVQDCHVLKYTPKEDHNGKIAALT VGGKTVSRFYKPDSSRLEFYRDLGLPPKQIHK
RML3_CHICKEN  119 AVTLRKVQDCHVLKYVSKEDSGGKTAKLL VGGKNVSPFSKSEAEEMEIFREAGVPRKQKVT
RL3_THET8     22  PVTVILAGPCPVVQRRTPKEDGYTAVQLGF LPQNPKRVNRP--LKGHF AKAGVEPVRI LR
RL3_ECOLI     23  PVTVIEVEANRVTQVKDLANDGYRAIQVTT GAKKANRVTKP--EAGHF AKAGVEAGRGLW
```

```
RML3_DOG      178  IFHVTDNAVIKPGTPLYAAHFRPGQYVDV TAKTIGKGFQGVMKRWGFKGQPATHGQTKTH
RML3_BOVINE   178  MFNVTDNAV I KPGTPLYAAHFRPGQYVDV TAKTIGKGFQGVMKRWGFKGQPATHGQTKTH
RML3_HUMAN    178  IFNITDNAAIKPGTPLYAAHFRPGQYVDV TAKTIGKGFQGVMKRWGFKGQPATHGQTKTH
RML3_MOUSE    178  IFHVTDNAVIKPGTPLYAAHFRPGQYVDV TAKTIGKGFQGVMKRWGFKGQPA SHGQTKTH
RML3_CHICKEN  179  TFNVTDNAI I KPGTPLYAAHFRPGQI VDV TAKTIGKGFQGVMKRWGFKGQPA SHGQTKTH
RL3_THET8     80  EIRDFNPE----GDTVTVEIFKPGERVDV TGT SKGRGFAGVMKRWNFAGGPD SHGAHKIH
RL3_ECOLI     81  EFRLAEGEFTVGSISVELFADVKKVDV TGT SKGKGFAGTVKRWNFRTQDATHGNSLSH
```

```
RML3_DOG      238  RRPGAISTG-DVARVWPGTKMPGOMGNKDR TEYGLKVWRINTKNNIIYVNGSVPGHRNCL
RML3_BOVINE   238  RRPGAISTG-DVARVWPGTKMPGQLGNVDRT AFGLKVWRINTKNNIIYVNGSVPGHRNCL
RML3_HUMAN    238  RRPGAVATG-DIGRVWPGTKMPGKMGNIRTE YGLKVWRINTKNNIIYVNGSVPGHKNCL
RML3_MOUSE    238  RRPGAISTG-DIARVWPGTKMPGRMGNQNR TVYGLKVWRINTKNNIIYVNGSVPGHKNCL
RML3_CHICKEN  239  RRPGAISTN-KVSRVFPGKMPGKMGNIRYTS FGLKVWRINTKHDIIYVHGSVPGHTNCL
RL3_THET8     136  RHPGSI GNRKTPGRVYKGGKMGAGHYGA ERVTVMNLEVV DVIPEENLLL VKGAVPGPN GGL
RL3_ECOLI     141  RVPGSI GQNQTPGKVEKGGKMGAGMGN ERVTVQSLD VVRVDAERNLLL VKGAVPGATGSD
```

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RML3_DOG      297  VKIKRDSNLPAYKDFCKNLPFPTYFPDGDEE ELPEDLYDENVCQPSAPSITFT
RML3_BOVINE   297  VKIKDSVLPAYKDFCKNLPFPTYFPDEDEKE LPELYDEEVCQPGAPSITFV
RML3_HUMAN    297  VKVKDSKLPAYKDLGKNLPFPTYFPDGDEEEL PEDLYDENVCQPGAPSITFA
RML3_MOUSE    297  VKIKDSTLPAYKDSCKNLPFPTYFPDGDEEEL PEDLFDLSVWQPSSEPSITFA
RML3_CHICKEN  298  VKVRDITKLRVYKDCNKNPPFPTFFADGDEK -LPEDLYQDMFQFTDPSVITYA
RL3_THET8     196  VIVRET KKAAK-----
RL3_ECOLI     201  LIVKPAVKA-----
```

MRPL9

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RML9_DOG      1  MGA*VACRAPAGTWRPPRGCGCCCAERRVGCSSRDSR*GPPPGPERDFSLSHSRGTVIVER
RML9_BOVINE   1  MAA*AAFAVPRGVQLR--VLTERLLRGGVRELLR*PRLSGSTPGSERDFSLSHSRGTVIVER
RML9_HUMAN    1  MAAPVVTAPGRALLR--AGAGRLRGGVQELLR*PRHEGNAPDLACNFSLSQNRGTVIVER
RML9_MOUSE    1  MAASVAPGVRTLWW---AGAAWLRQGGIRELFR*PRIEGSTPG--RDFSLSHYQSTVIVER
RML9_CHICKEN  1  -----MKTILSNQTVDIPEQVSVSLKGR*TVIVK-
RL9_THET8    1  -----
RL9_ECOLI     1  -----
```

```

RML9_DOG      61  WWQVPLAGEGRK*PRLHRRHRVYRLVEDTKHGPRGGLELILTR*SV*EGLGVRGDLVSVKKS*L
RML9_BOVINE   59  WWKVPLAGEGRK*PRLHRRHRVYKLVEDTKHRPKENLELILTQ*SVDELGVRGDLVSVKKS*V
RML9_HUMAN    59  WWKVPLAGEGRK*PRLHRRHRVYKLVEDTKHRPKENLELILTQ*SVENVGVRGDLVSVKKS*L
RML9_MOUSE    56  WWKVPLAGEGRK*PHLHRRHRVYKLVEDTKHRPKDNLELILTQ*SVDEIGVRGDLVSVKKS*V
RML9_CHICKEN  29  -----GPRGTLRRDFNHINVELSLLGKRRKLRV*DK--WWGNR*KELATV*RTIC
RL9_THET8    1  -----MKVILLEPLENLGDVGVV*VDV*KPGY
RL9_ECOLI     1  -----MQVILLDKVANLGLSDQVNVKAGY
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RML9_DOG      121  GRNRLLPQGLAV---YASPENKKLFEEKLLRQEGKLEKIQT*RTGEMTVKFLRSCH-LEV
RML9_BOVINE   119  GRNRLLPQGLAV---YASPENKKLFEEKLLRQEGKLDKIQT*KAGEATVKFLRSCH-LEV
RML9_HUMAN    119  GRNRLLPQGLAV---YASPENKKLFEEKLLRQEGKLEKIQT*KAGEATVKFLKSCR-LEV
RML9_MOUSE    116  GRNKLLSQGLAV---YASPENRKLFEEEKSLRREGKLEKIQT*KAGEATVKFLRSCH-LEV
RML9_CHICKEN  75  SHVQNMIKGVTLGFRYKMRSVYAHFPINVTIQDNGSLVEIRN*FLG*EKYIRRV*MRPGVSC
RL9_THET8    26  ARNYLLPRGLAV---LATESNLKALEAR-IRAQAKRLAERK*AEA-ERLKKILENLT-LTI
RL9_ECOLI     26  ARNELVPOGKAV---PATKKNIEFFEAR-RAELEAKLAEV*LAAANARA*EKINALET-VTI
```

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RML9_DOG      177  GMKNNIKWELNPEIVARHFFKNLG---VVVAPHALKLPEEPIT*RWGEYWCEVTVNGLDT
RML9_BOVINE   175  GMKNNVKWELNPEIVARHFLRNLG---VVVAPHALKLPEEPIT*QGEYWCEVTVNGLDT
RML9_HUMAN    175  GMKNNVKWELNPEIVARHFFKNLG---VVVAPHILKLP*AEPI*TRWGEYWCEVTVNGLDT
RML9_MOUSE    172  GMKNNVKWELNPEIVARHFFKNLG---VVVAPHALRLPEEPIT*RWGEYWC*DV*TRGHQG
RML9_CHICKEN  135  AVSQAQDELILEGNDIELVSN*SG----ALIQQATT*VKNKKIRK*FLDGIYVSEKGI*VWV
RL9_THET8    80  PVRAG-ETKTYGSVTAKDIAEALSRQHGV*TIDPKRLALEK-PIKELGEYVLT*YKPHPEVP
RL9_ECOLI     81  ASKAGDEGKLF*GSIGTRDIADAVT-AAGVEVAKSEVRLP*NGVLR*TTGEHEVSFQVHSEV*F
```

```

RML9_DOG      233  VR-VPMSVVKFER-PKTKRYKYWLAQQAAGMAPTNSQTI-
RML9_BOVINE   231  VR-VPMSV*VNFER-PKTKKI*QVLVSPASCQGNGLHQLP---
RML9_HUMAN    231  VR-VPMSV*VNFEK-PKTKRYKYWLAQQAAGAMAPTSPQI--
RML9_MOUSE    228  IRNRTITRLKMEANMEAD*RKKILILCGFQQPQVAKTFTRLE
RML9_CHICKEN  190  LKNKTKNETA*QHVMDWDI-----
RL9_THET8    138  IQ-LK*SVVAQE-----
RL9_ECOLI     140  AK-VI*VNVVAE-----
```

MRPL10

```
RML10_DOG      1  MAAVAGMLRGGLLPQAGRLPTLQTVRYGSKAVTRHRRVMHFERQKLMALTEYIPPKPAV
RML10_BOVINE   1  MAAVAGMLRGGLLPQAGRLPTHQFIRYGSKAVTRHRRVMHFERQKLMVTEYIAPKPVV
RML10_HUMAN    1  MAAVAGMLRGGLLPQAGRLPTLQTVRYGSKAVTRHRRVMHFQROKLMVTEYIPPKPAI
RML10_MOUSE    1  MAAVAGILRGGLPPRAAWLPTLQTVRHGSKAVTRHWRVMHFQROKLMVTEYIPPKPAI
RML10_CHICKEN  1  MAA-----LSGPAPWRRGWLPAQLQVRRGSKAVTRHWRVMHFQROKLMVTEYIAPRPAV
RL10_THET8     1  -----
RL10_ECOLI     1  -----

                                                    *
RML10_DOG      61  NPRCLSPSPSPPOEET--GLIRLLRREIDVFRNRMIAVCQNVLSAEDKLLIRHRLRK
RML10_BOVINE   61  NPRCLPSPSPSPPOEET--GLIRLLRREIAAVFRDNRMIAVCQNVMSAEDKLLMRHQLRK
RML10_HUMAN    61  HPSCLSPSPSPPOEEI--GLIRLLRREIAAVFQDNRMIAVCQNVLSAEDKLLMRHQLRK
RML10_MOUSE    61  NPRCLPSPSPSPPOEES--GLVRLRQDIVAVFRDNRMIAVCQNVLSAEDKLLMRHQLRK
RML10_CHICKEN  56  PERCLAPRRKVEEEEEYGYARLLRQOVEEAFRDNRMIAVCQYNSMPGEDMVLMRHYLRK
RL10_THET8     1  -----MPNKRNV-----ELIATLKENLERAQGSFFLVNYQGLPAKETHALRQALKQ
RL10_ECOLI     1  -----MALNLQDK-----QATVAEVSSEVAKGALSAVVADSRGVTVDKMTLRLKAGRE

                                                    *
RML10_DOG      119 HK---ILMKIFPNOVLKPFLEDSKYQNLPLFVGHNLLLVSEEPKVKEMVRILKSVP---
RML10_BOVINE   119 HK---ILMKVFPNOILKPFLEDSKYQNLPLFVGHNLLLVSEEPKVKEMVRILKSVP---
RML10_HUMAN    119 HK---ILMKVFPNOVLKPFLEDSKYQNLPLFVGHNMMLLVSEEPKVKEMVRILRTVP---
RML10_MOUSE    119 HK---IFIKVFPNOVLKPFLENSKYRNLLPLFVGHNLLLVSEEPKVKEMVRVLSVP---
RML10_CHICKEN  116 HN---IEVKFVINEIVRPVLSQSRYKNLLPLFVSRNILLVSPETKAKEMLRVLKGVV---
RL10_THET8     47  NG---ARLFVAKNTLIRLALKELGLPELDG-LQGPSAVVFYED--PVAAAKTLVQFAKSN
RL10_ECOLI     48  AG---VYMRVVRNTILRRAVEGTPFECLKDAFVGPTLIAYSMEH-PGAAARLKFKEFAKAN

          *   *   *   *   *
RML10_DOG      173 ---FLPLLGGCIDDITLSRQGFINYSQLPSSLALAQGELVGGLTFRMAQTHLLLQHQPFLQ
RML10_BOVINE   173 ---FLPLLGGCIDDITLSRQGFINYSKLPSSLALAQGELVGGLTLLTARTHSLLQHHPLQL
RML10_HUMAN    173 ---FLPLLGGCIDDITLSRQGFINYSKLPSPPLVQGELVGGLTCLTAQTHSLLQHQPLQL
RML10_MOUSE    173 ---FLPLLGGCVDDITLSRQGLVDYAKLPSLDQLOGQLVGGLTHLMAQTRYLLQHQPVQL
RML10_CHICKEN  170 ---QVNLGACIDDITLSRQGVENFAKLPSLETSGQTLGTLALLPSQTCMSLQHAHAHL
RL10_THET8     101 PKGIPQVKSGLLQGOILTAKDVEALADVPTMDEL RADVVGVLQAPMAELVGVLGGVAREL
RL10_ECOLI     104 --AKFEVKAAAFEGELIPASQIDRLATLPTYEEAIAARLMATMKEASAG-----KL

RML10_DOG      230 TALLDQYIROQOEGDSVTPASEQPASPDVPVNS
RML10_BOVINE   230 TALLDQYARQOLEGDPVVPASAQPDPPNPVQDS
RML10_HUMAN    230 TTLLDQYIREQREKDSVMSANGKPD-PDTPVDS
RML10_MOUSE    230 TSLLDQYVKEQNEGDCATSANEKLHPPDPAPDA
RML10_CHICKEN  227 AALLEGHIHQLOACAGETGSPAGTEPAQSSGTQ
RL10_THET8     161 VGILEAYAEKKA-----
RL10_ECOLI     152 VRTLAAVRDAKEA-----
```

MRPL11

```
RML11_DOG      1  MSKLNRAARALRKPEAGG-----VIRTIVRAGQAMTGPPLGPILGQRGVSNQFCKE
RML11_BOVINE   1  MSKLSRATRALRKPEAEG-----VIRTIIRAGQAMPGPPLGPILGQRGVSNQFCKE
RML11_HUMAN    1  MSKLGRAARGLRKPEAGG-----VIRAIVRAGLAMPGPPLGPVILGQRGVSNQFCKE
RML11_MOUSE    1  MSKLSRATRITLKKPEAGG-----VIRSIVRAGQAIIPGPPLGPILGQRGVSNQFCKE
RML11_CHICKEN  1  MSKAAARAVRAVRGGSGGGSAPAPHSRPLRMLIPAGGAAPGPPLGPVILGQRGVPIGAFQOD
RL11_THET8     1  -MKKVVAV-----VKLQLPAGKATPAPPVGPALGQHGANIMEFVKA
RL11_ECOLI     1  MAKKVQAY-----VKLQVAAGMANPSPVGPALGQQGVNIMEFCKA
```

```
RML11_DOG      53 FNEKTKDIKEGIPLPTKIFVKPDRTFEIKIGQPTVSYFLKAAAGIEKGARQTGKEVAGLV
RML11_BOVINE   53 FNEKTKDIKEGIPLPTKIFVKPDRTFEIKIGQPTVSYFLKAAAGIEKGARNTGKEVAGLV
RML11_HUMAN    53 FNEKTKDIKEGIPLPTKILVKPDRTFEIKIGQPTVSYFLKAAAGIEKGARQTGKEVAGLV
RML11_MOUSE    53 FNEKTKDIKEGIPLPTKIFIKPDRTFELKIGQPTVSYFLKAAAGIEKGARHTGKEVAGLV
RML11_CHICKEN  61 FNEKTRSVRPGVPLKVRLRVKPDRTYELSIGPPPTS YFLKAAAGIEKAGRPGHEEGGLL
RL11_THET8     41 FNAATANMGDAI-VPVEITTYADRSFTFVTKTPPASYLIRKAAGLEKGAHKPGREKVGRI
RL11_ECOLI     42 FNAKTDSLEKGLPIPVVITVYADRSFTFVTKTPPAAVLLKKAAGIKSGSGKPNKDKVGKI
```

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RML11_DOG      113 TLKHVYEIAQV-KAQDEAFALQD-VPLSSVRSIIGSARSLGIRVVKDLSSEELAAFQKE
RML11_BOVINE   113 -----AQDDAFALQD-VPLSSVRSIIGSARSLGIRVVKDLSSEELAAFQKE
RML11_HUMAN    113 -----AQDEAFALQD-VPLSSVRSIIGSARSLGIRVVKDLSSEELAAFQKE
RML11_MOUSE    113 SLKHVYEIACV-KAKDDAFAMQD-VPLSSVRSIIGSARSLGIRVVKDLSAEELAAFQKE
RML11_CHICKEN  121 SLKHVYEVAAARWGGDEELRRRGGGSVRAFVGSVLGTARSLGIRVQPRVTPEDVAASQER
RL11_THET8     100 TWEQVLEI-----AKQKMPDLNT-TDLEAAARMIAGSARSMGVEVVGAPEVKDA-----
RL11_ECOLI     102 SRAQIQEI-----AQTKAADMTG-ADIEAMTRSIEGTARSMLVVED-----
```

```
RML11_DOG      171 RAAFLAAQKEADLAAQAEAAKK
RML11_BOVINE   159 RALFLAAQKEADLAAQAEAAKK
RML11_HUMAN    159 RALFLAAQKEADLAAQAEAAKK
RML11_MOUSE    171 RAVFLAAQKEADLAAQAEAAKK
RML11_CHICKEN  181 RRAAQAAAEAGAAEEVGGGEKT
RL11_THET8     -----
RL11_ECOLI     -----
```

MRPL13

```

RML13_DOG      1  MSFSRAPQQWATFARVWYLLDGKMQPPGKLAAMASIKLQGLHKPVYHQLSDCGDHVVIM
RML13_BOVINE   1  MASLSRAPQQWATFARVWYLLDGKMQPPGKLAALASVRLQGLHKPVYHQLSDCGDHVVIM
RML13_HUMAN    1  MSFSRAPQQWATFARIWYLLDGKMQPPGKLAAMASIRLQGLHKPVYHALSDCGDHVVIM
RML13_MOUSE    1  MSFSRAPQQWATFARMWYLLDGKMQPPGKLAIVIASNKLOGLNKPVYHQLSDCGDHVVII
RML13_CHICKEN  1  MASYTKAAQQWATFARAWYLLDAKMQPPGKLAAVTIRRLRLEGRHKPIYHAINDCGDHVVII
RL13_THET8     1  MKTYVPK-----QVEPRWYLLDAEGKTLGRLATKIATLLRGKHRPDWTPNVAMGDFVVVV
RL13_ECOLI     1  MKTFIAKPE---TVKRDWYVVDATGKTLGRLATELARRLRGKHKAEYTPHVDTGDYIIVL
  
```

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```

RML13_DOG      61  NTRHIAFSGNKWEQKVYSSHTGYPGGFQVTAQLHQKDPVAIVKLAIYGMLPKNLHRRT
RML13_BOVINE   61  NTRHIAFSGNKWEQKVYSSHTGYPGGFQVTAQLHRKDPVAIVKLAIYGMLPKNLHRRT
RML13_HUMAN    61  NTRHIAFSGNKWEQKVYSSHTGYPGGFQVTAQLHLRDPVAIVKLAIYGMLPKNLHRRT
RML13_MOUSE    61  NTRHIAFSGNKWEQKVYSSHTGYPGGFQVTAQLHRKDPVAIVKLAIYGMLPKNLHRRT
RML13_CHICKEN  61  NTRHIAFSGNKWEQKVYSSHTGYPGGFQVTAQLHLKDPVAIVKLTIYRMLPKNLLRRT
RL13_THET8     56  NADKLRVTGKLEQKIYTRYSGYPGGLKKIPEKMLATHPERVLEHAVKGMLPKGPLGR-
RL13_ECOLI     58  NADKVAVTGNKRTDKVYHHTGHIGGIKQATFEEMIARRPERVIEIIVKGMPLPKGPLGRA
  
```

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RML13_DOG      121 IMQRLHLFPDEDIPEDIRKNLVEELPQPRKVPRLDEYEQEEIEAFPIVWSPPEDYRL-
RML13_BOVINE   121 IMQRLHLFPDEDIPEDILKNLVEELPQPRKVPRLDEYEQEEIEAFPRVWSPPEDYRL-
RML13_HUMAN    121 MMERLHLFPDEYIPEDILKNLVEELPQPRKIPKRLDEYEQEEIDAFPRLWTPPEDYRL-
RML13_MOUSE    121 IMQRLHLFPDEDIPEDILKNLVEELPQPRRVPKRLDEYEQEEIEAFPRVWTPPDDFRM-
RML13_CHICKEN  121 IMQRLHLFPDDVIPEDIEKNLQETPQPRVVPRLDEYTPEEIAAFPRVWTPPKDFRMK
RL13_THET8     115 -----R-----PDHPHQQRPEKLEV-----
RL13_ECOLI     118 MFRKLVYAG-----NEHNHAAQQPQVLDI-----
  
```

MRPL15

```
RML15_DOG      1  MAGPVQ-AGGARTLDLLRALPRVSLANLKPNGSRKPERRR-RG--RRRGRKCGRGHKGE
RML15_BOVINE   1  MAGPVRGAGPWALDLLRALPRVSLANLRPNPGSRKPERRR-RG--QRRGRKCGRGHKGE
RML15_HUMAN    1  MAGPLQ-GGGARALDLLRGLPRVSLANLKPNGSKKPERRP-RG--RRRGRKCGRGHKG-
RML15_MOUSE    1  MAGTAR--GCGTSLDLLRS LPRVSLANLKPSPNSRKRERRP-RD--RRRGRKCGRGHKGE
RML15_CHICKEN  1  MSGNGV-HGVHGALQLLRS LPKVSLANLRPNPGSKKPERRRRG--RYRGRKCGRGHKGE
RL15_THET8     1  -----MKLSDLRPNPGANKRRKRVRGPGSGHGKKTATRGHGKQ
RL15_ECOLI     1  -----MRLNTLSPAEGSKKAGKRLGRGIGSGLGKKTGGRGHKQ
```

```
RML15_DOG      57  RQR--GTRPRLGFEGGQTPFYIRIPKYGFNEGHSFRRQYQPLSLNRLQYLIDLGRVDPTQ
RML15_BOVINE   58  RQR--GTRPRLGFEGGQTPFYIRIPKYGFNEGHSFRRQYQPLSLNRLQYLIDLGRVDPTQ
RML15_HUMAN    56  ----GTRPRLGFEGGQTPFYIRIPKYGFNEGHSFRRQYKPLSLNRLQYLIDLGRVDP SQ
RML15_MOUSE    56  RQR--GTRPRLGFEGGQTPFYIRIPKYGFNEGHSFRHQYQPLSLRRLQYLIDLGRVDPTQ
RML15_CHICKEN  58  RQR--GNRPRLGFEFGGQTPFYLSIPKYGFNEGHSRRQYHPLSLQKLOYLIDLGRVDPTQ
RL15_THET8     39  KSRSGGLKDPRRFEGGRSTTLMLRIPKRGMOGQVPGEIKRP---RYQGVNLIKDLARFEG--
RL15_ECOLI     39  KSRSGGVR-RGFEGGOMPLRRLPKFGFTSR-----KAA---TAEIRLSDLAKVEG--
```

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```
RML15_DOG      115  PIDLTQLVNGRGVTIQPLKRDYGVQVVEEGADTFKAKVNIEVQLASELAIAAIEKNGGVV
RML15_BOVINE   116  PIDLTQLVNGRGVTIQPSKRDYGVQVVEEGADTFKAKVNIEVQLASELAIAAIEKNGGVV
RML15_HUMAN    111  PIDLTQLVNGRGVTIQPLKRDYGVQVVEEGADTF TAKVNIEVQLASELAIAAIEKNGGVV
RML15_MOUSE    114  PIDLTQLVNGRGVTIQPLKRDYGVQVVEEGADTFQAKINIEVQLASELAIAAIEKNGGVV
RML15_CHICKEN  116  PIDLTQLVNGRGVTIQPLKRDYGVQVVEEGADTF TAKVNIEVQLASELAIAAIEKNGGVV
RL15_THET8     94  --EVTPELVLRAG---LKKGYRLKILGEGE---AKPLKVVAHAFSKSALEKILKAAGGEP
RL15_ECOLI     88  --GVVDLNTLKAANTIGIQIEFAKVILAGEV---TTPVTVRGLRVTKGARAAIEAAG--
```

```
RML15_DOG      175  TTAFYDPRSLEILCKPVPFFLRGQIPKRMPLPEALVPYYTDAKNRGYLADPAKFPEARL
RML15_BOVINE   176  TTAFYDPRSLEILCKPIPFFLRGQIPKRMPLPEALVPYYTDARNRGYLADPARFPEARL
RML15_HUMAN    171  TTAFYDPRSLEILVCKPVPFFLRGQIPKRMPLPEELVPYYTDAKNRGYLADPAKFPEARL
RML15_MOUSE    174  TTAFYDPRSLEILCKPIPFFLRGQIPKRMPLPPELVVPYYTDAKNRGYLADPAKFPEARL
RML15_CHICKEN  176  TTSFYDPRSLEILIRPVPFFLRGQIPKRMPLPEDLVRYYTDAKNRGYLADPSKVAEARL
RL15_THET8     146  VLLEA-----
RL15_ECOLI     141  ---IEE-----
```

```
RML15_DOG      235  ELAKKYGYILPDITKDELFKMLSTRKDPRQIFFGLAPGWVVMNTDKKILKPTDENLLKYY
RML15_BOVINE   236  ELAKKYGYILPDITKDELFKMLSSRKDPRQIFFGLAPGWVVMNADKKILKPTDEKLEYY
RML15_HUMAN    231  ELARKYGYILPDITKDELFKMLCTRKDPRQIFFGLAPGWVVMNADKKILKPTDENLLKYY
RML15_MOUSE    234  ELAMKFGYVLPDITKDELFKMLSARKDPRQIFFGLAPGWVVMNADKKILKPTDENLLKYY
RML15_CHICKEN  236  ELAKKYGYILPDITKDELFKMLSTRKDPRQIFFGLAPGWIVNMADKKILKPTDERLLKYY
RL15_THET8     -----
RL15_ECOLI     -----
```

MRPL18

```

RML18_DOG      1  MALRSRFWECLSVCRNPGNSHFSQTTPRGLHRCGVAALSTSAEPAAKPEVDPVENAAVAP
RML18_BOVINE   1  MALRSRSWELLPVCRNPG-----CRVAAFSTSAKPVVKPEADPVGNEAVAP
RML18_HUMAN    1  MALRSRFWGLFSVCRNPG-----CRFAALSTSSPEAAKPEVDPVENEAVAP
RML18_MOUSE    1  MALRPRFWKCLSVCRKLE-----CGFAALSTSSVPAVQPDVESKENEAVAP
RML18_CHICKEN  1  MALGGRGCMLLAAGRLOACG-----AGFRYS SATATAGLKSVDIDTRENEVVSP
RL18_THET8     1  -----ARLTAYE
RL18_ECOLI     1  -----MDKKSARI
  
```

```

RML18_DOG      61  EFTNRNPRNLELLGVARKERGWGTTWPSREFWHRLRVIKTQHHVEALVEHRN-GKVVVSA
RML18_BOVINE   47  EFTNRNPRNLELLAVARKERGWGTVVWPSREFWHRLRVIKRSQHHIEALVEHRN-GQVVVSA
RML18_HUMAN    47  EFTNRNPRNLELLS VARKERGWRTVTPSREFWHRLRVIKRTQHHVEALVEHQN-GKVVVSA
RML18_MOUSE    47  EFTNRNPRNLELLGVARKERGWATVWPNERFWHRLRVVKTQHHVEAFVEHLN-GQVVVSA
RML18_CHICKEN  49  DFTNRNPRNLEQLALARKERGWKTTWPKREFWHRLRLERTQHYVEAFVERSN-GNVVLSA
RL18_THET8     8  RRKFRVRNRKRTGRLR-----LSVFRSLKHIYAQIIDDEKGVTLVSA
RL18_ECOLI     9  RRATRARRKLOELGATR-----LVVHRTPRHIYAQVIAPNGSEVLVAA
  
```

```

                *   *       *
RML18_DOG      120  STREWAIKKHLYSTRN-VVACESIGRVLAERCLEAGINFMVYQP-TPWEAASDSMKRLQN
RML18_BOVINE   106  STREWAIKKHLYSTKS-VVACESVGRVLAQRCLEAGINFMVYQP-TPWEAASDSMKRLQI
RML18_HUMAN    106  STREWAIKKHLYSTRN-VVACESIGRVLAQRCLEAGINFMVYQP-TPWEAASDSMKRLQS
RML18_MOUSE    106  STREWAIKKHLYSTRN-VVACESIGRVLAQRCLEAGINFMVYQP-TPWEASSDSIKRLQN
RML18_CHICKEN  108  STREWAIKKHLYSPTG-VTACRNLGRVMAQRCLEAGINFNFKAVIPWEHRCDSIQEFEK
RL18_THET8     51  SSLA-----LKLKGNKTEVARQVGRALAEKALALGKQVAFDR-GPYKYHG-RVKALAE
RL18_ECOLI     52  STVEKATAEOLKYTGK-DAAAANGKAVAEKALEKGIKDVSFDR-SGFQYHG-RVQALAD
  
```

```

RML18_DOG      178  AMTEGGVVLQEPRIYE
RML18_BOVINE   164  GMTEGGVVLQEPRIYE
RML18_HUMAN    164  AMTEGGVVLREPRIYE
RML18_MOUSE    164  AMTESGVVLRPPIYE
RML18_CHICKEN  167  AMTEGGVVLREPRIYQ
RL18_THET8     103  CAREGGLEF-----
RL18_ECOLI     109  AAREAGLQF-----
  
```


MRPL22

```
RML22_DOG      1  MAAATLERLGASWPNLR-RKLALGLLSSHNVLPQSYIHTSGSLDISRKWEKKNKIVYPP
RML22_BOVINE   1  MAAVILERL GALWVQNLR-GKLALGLFSSHSILPQSHIHTSASLEISRKWEKKNKIVYPP
RML22_HUMAN    1  MAAAVLGQLGALWIHNLR-----SRGKLALGVLPQSYIHTSASLDISRKWEKKNKIVYPP
RML22_MOUSE    1  MAAALIRELGALRVPNLR-----IWATQTLRVLPSPSCIHTSASLDISRKWEKKNKIVYPP
RML22_CHICKEN  1  ---MAVRCAGSAWVRGLLGWAWPERWFAAGSAFPLSCIHTSTSLQKLGKWEKKNRIVYPP
RL22_THET8     1  -----
RL22_ECOLI     1  -----
```

```
RML22_DOG      60  QLPGEPRRPAEIIYHCRRQIKYSKDKMWYLAKLIRGMSIDQALAQLEFSDKKGAQIIKEIL
RML22_BOVINE   60  QLPGEPRRPAEIIYHCRRQIKYSKDKMWYLAKLIRGMSIDQALAQLEFSDKKGAQIIKEVL
RML22_HUMAN    56  QLPGEPRRPAEIIYHCRRQIKYSKDKMWYLAKLIRGMSIDQALAQLEFNDKKGAKI I KEVL
RML22_MOUSE    56  QLPGEPRRPAEIIYHCRRQIKYSKDKMWYLAKMIRGMSIDQALAQLEFNDKKGAQIIKEVL
RML22_CHICKEN  58  QLPGEPRRPAEIIYHCRRQIKYSKDKMWYLAKLIRGMSIDQALAQLEFNDKKGAKI I KEVL
RL22_THET8     1  -----MEAKAIARYVRI SPRKVRVLDLIRGKSL EEARNILRYTNKRGAYFVAKVL
RL22_ECOLI     1  -----METIAKHRHARSSAOKVRLVADLIRGKKVSOALDILTYTNKKAAVLVKKVL
```

```
RML22_DOG      120  LEAQDMAVRDHNVEFRSNLYIAESTSGRGQYLKRIRYHGRGRFGIMEKVYCHYFVKLVEG
RML22_BOVINE   120  LEAQDMAVRDHNVEFRSNLYIAESTSGRGQYLKRIRYHGRGRFGIMEKVFCHYFVKLVEG
RML22_HUMAN    116  LEAQDMAVRDHNVEFRSNLYIAESTSGRGQCLKRIRYHGRGRFGIMEKVYCHYFVKLVEG
RML22_MOUSE    116  LEAQDMAVRDHNVEFRSNLHIAESTSGRGQCLKRIRYHGRGRFGIMEKVYCHYFVKLVEG
RML22_CHICKEN  118  LEAQDMAVRDHNVEFRSNLHIAESLAGKHGHTKRIRLHGKGMFGIMKIVKCHYFVKLVEG
RL22_THET8     52  ESAAANAVNNEHDMLEDR-LYVKAAYVDEGPALKRVLPRARGRADI I KKRTSHITVILGEK
RL22_ECOLI     52  ESAIANAEHNDGADIDD-LKVTKIFVDEGPSMKRIMPRAKGRADRILKRTSHITVVVSDR
```

```
RML22_DOG      180  PPPPEARKTAVTHAKEYIQEELRN-----RTIIHTL-----
RML22_BOVINE   180  PPPPEAPKTAVTHAKEYIQEELRN-----RTIIHAL-----
RML22_HUMAN    176  PPPPEPPKTAVAH AKEYIQQFAAGPSFTLYDEEIQTPQCIYFAIYFLKINKN
RML22_MOUSE    176  PPPPEVPKTAVDHAKDYIQQLPS-----RTIIHTL-----
RML22_CHICKEN  178  PPTLPEPRKTGFDOAKEYVQLRS-----RTL VHTL-----
RL22_THET8     111  HGK-----
RL22_ECOLI     111  -----
```

MRPL24

*

```

RML24_DOG      1  ---MRLSALLALASKVTLPRDYRYGMSRPG---SLADRRKNPPGTTRR-----RV
RML24_BOVINE   1  ---MRLSALLALASKVTLPPNYRYGMSRPG---SLADKKKNPPGTTRR-----RV
RML24_HUMAN    1  ---MRLSALLALASKVTLPPHYRYGMSPPG---SVADKRKNPPWIRRR-----PV
RML24_MOUSE    1  ---MRLSALLALASKATSSPFYRYGMSRPG---SIADKRKNPPWSRRR-----PV
RML24_CHICKEN  1  MAAGIGPEAFAAVREAVMGLGGAGRALWREADDRSAPHCRFNDPRLLLRGHKAPANGGGA
RL24_THET8     1  -----
RL24_ECOLI     1  -----
  
```

```

RML24_DOG      45  AVEPISDEDWHLFCGDTVEILEGKDAGKQGKVVQVIRQRNWWVLEGLN----THYRYVGK
RML24_BOVINE   45  AVEPIPEEDWHLFCGDRVEILEGKDAGKQGKVVQVIRQRNWWVVEGLN----THYRYVGK
RML24_HUMAN    45  VVEPISDEDWYLFVCGDTVEILEGKDAGKQGKVVQVIRQRNWWVVVGLN----THYRYIGK
RML24_MOUSE    45  VVEPISDEDWHLFCGDMVEILEGKDAGKQGKVVQVVRQRNWWVLEGLN----THYRYIGR
RML24_CHICKEN  61  ACSTPAYGSOHAPRQPPARAHSAAPIGTAAAPRMPRVAPGPACTARGLHGSPGPHYGYVNR
RL24_THET8     1  -----MRVKMHVKKGDTVLVASGKYKGRVGVKVEVLPKKYAVIVEGVN--IVKKA VRVSP
RL24_ECOLI     1  -----MAAKIRRDDEVIVLTGKDKGKRGKVKNVLSSG-KVIVEGIN--LVKKHQKVPV
  
```

```

RML24_DOG      101 TAEISRGTMIPSEAPLLHHQVKLVDVDRKPTEVEWRFTEAGERVRVSSRSGRIIPKPDFP
RML24_BOVINE   101 TVDFRGTMVPSEAPLFHNQVKLVDPMDRKPTEVEWRFPEAGERVRVSPRSGRIIPKPDVP
RML24_HUMAN    101 TMDYRGTMVPSEAPLLHRHVKLVDPMDRKPTEIDWRFTEAGQVRVSTRSGRIIPKPEFP
RML24_MOUSE    101 TKDHRGTMVASEAPLLHHQVKLVDVDRKPTEIQWRFTEAGERVRVSTRSGRIIPKPEFP
RML24_CHICKEN  121 DAKYSSTFVSEAPLLNQISLVDPEDRKPTEVDWRYTEEGERVVSLRIGRIIPLPLWQ
RL24_THET8     54  KYPQGGFTEKEAPLHASKVRPICPACGKPTRVRKKFLENGKKIRVCAKCGGALDTEE--
RL24_ECOLI     51  ALNQPCGIVEKEAAIQVSNVAIFNAATGKADRVGERF-EDGKKVRFKSNSETIK-----
  
```

```

RML24_DOG      161  RADGIVPETWTDGPKDTSVEDALERTYVPRLKLTLEEEVMEAMGIQETRRHKKVYWY
RML24_BOVINE   161  RADGIVPETWIDGPKDTSVEDALEKTYVPRLKLTLEEEVMEAMGIQETRRHKKVYWY
RML24_HUMAN    161  RADGIVPETWIDGPKDTSVEDALERTYVPCCLKTLQEEVMEAMGIKETRKYKKVYWY
RML24_MOUSE    161  RADGIVPETWTDGPKDTSVEDALERTYVPRLKLTLEEDVMEAMGIQETRRFKKVYWY
RML24_CHICKEN  181  RRDGIVPEQWIDGPKDTSVDDALDKTYTPSLKTFEEEMDAMGIVETRRAKKSYYWY
RL24_THET8     -----
RL24_ECOLI     -----
  
```

MRPL27

*

```

RML27_DOG      1  MASAAALALRTR--AAALLSPQAASLAVRYASKKTGGSSKNLGGKSPGKRFGLRKMEGHY
RML27_BOVINE   1  MALAVLAWRTRTAVTALLSPQAAALAVRYASKKTGGSSKNLGGKSPGKRFGLRKMEGHY
RML27_HUMAN    1  MASVVLALRTRTAVTSLSPATAALAVRYASKKSGSSKNLGGKSSGRRQGIKKMEGHY
RML27_MOUSE    1  MAAAAITLRTAAVTALLSPTAPTALAVRHASKKTGGSSKNLGGKSRGKHYGIKKMEGHY
RML27_CHICKEN  1  -----MAAWGR-----LFLSVPQTSLAAVRCASKKSGSSKNLGGRSPGKRYGAKKVEGAY
RL27_THET8     1  -----MAHKKGLGSTRN-GRDSQAKRLGVKRYEGQV
RL27_ECOLI     1  -----MAHKKAGGSTRN-GRDSEAKRLGVKRFGGES
  
```

```

RML27_DOG      59  VHAGNILATQRHFRWHPGAHVGLGKKKHLVYALEEGVVHYTKEVYVSPSPNTEAVELVTRL
RML27_BOVINE   61  VHAGNILATQRHFRWHPGAHVGLGKNKCLVYALEEGVVRYTKEVYVSPSPNSEAVDLVTRL
RML27_HUMAN    61  VHAGNIIATQRHFRWHPGAHVGVGKNKCLVYALEEGIVRYTKEVYVPHPRNTEAVDLITRL
RML27_MOUSE    61  VHAGNILGTQRQFRWHPGAHVGLGRNKCLVYALEEGIVRYTKDVYVVPNPKNTEAVDLVTSL
RML27_CHICKEN  52  VHAGNILATQRLIRWHPGAHVGMGRNKTLVYALEEDGIVRYTKEVYVPPPRSSSESREVICSL
RL27_THET8     31  VRAGNILVRQGRTRFKPGKNVGMGRDFTLFAIVDGVVEFQ----DRGRLG-----
RL27_ECOLI     31  VLAGSIIVRQGRTKFHAGANVGCGRDHTLFAKADGKVKFE----VKGPKN-----
  
```

```

RML27_DOG      119  PKGAVLYKTFVHVVPVKPEGTFLVAML
RML27_BOVINE   121  PEAGAVLYKTFVHVVPKPEGTFLVAML
RML27_HUMAN    121  PKGAVLYKTFVHVVPKPEGTFLVAML
RML27_MOUSE    121  PKGAVLYKTFVHVVPKPEGTFLVDML
RML27_CHICKEN  112  PKGAILYKTFISVIPTTEVGSFKLVTML
RL27_THET8     77  -----R-YVHVRPLA-----
RL27_ECOLI     77  -----RKFISIEAE-----
  
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MRPL28

RML28_DOG 1 MPLHKVPVGLWRRLWLRREGICSRLLPPHYLRSLQEARAPAPVHYRPRGVGAGAGAGGRR
 RML28_BOVINE 1 MPLHKVPVGLWKRRLRLREGIYSRLPAHYLRSLQEARAPAPVHYRPRGVGAGAGAGGRR
 RML28_HUMAN 1 MPLHKYPVWLWKRLQLREGICSRLLPGHYLRSLQEARAPAPVHYRPRGVGAGAGAGGRR
 RML28_MOUSE 1 MPLHRYPVHLWQKLRRLRQGCARLPAHFLLRSLEEFERTPTPVHYKPHGTFKINP-KNGQR
 RML28_CHICKEN 1 -----
 RL28_THET8 1 -----
 RL28_ECOLI 1 -----

RML28_DOG 61 ERVQDVPIPVYRPPAQGLWGGEWVVGRYRVDGHDQLSKRVKKVWKPQLLQRELYSEIL
 RML28_BOVINE 60 ERVEDVPIPVHYPPESQGLWGGEWVVGKGRYVNNDFSKRVKKVWKPQLFQRELYSEIL
 RML28_HUMAN 60 ERVEDVPIPIYFPPESQGLWGGEWVVGQIYANNNDKLSKRLKKVWKPQLFEREFYSEIL
 RML28_MOUSE 60 ERVEDVPIPVHYPPESQGLWGGEGLILGRYANNNDKLSKRVKKVWKPQLFTRELYSEIL
 RML28_CHICKEN 1 -----
 RL28_THET8 1 -----
 RL28_ECOLI 1 -----

RML28_DOG 121 DTKFAVTVTARTLDLIDAAYGDFYILKTPEDLCSKFGMDLKRGMLLR-LARQDPQLHP
 RML28_BOVINE 120 DR-FTVTVMRTLDLIDEAYGDFYILKTPKEDLCSKFGMDLKRGMLLR-LARQDPQLHP
 RML28_HUMAN 120 DKKEFTVTVMRTLDLIDEAYGLDFYILKTPKEDLCSKFGMDLKRGMLLR-LARQDPQLHP
 RML28_MOUSE 120 DKKEFTVTVMRTLDLIDEAYGDFYILKTPKEDLCSKFGMDLKRGMLLR-LARQDPQLHP
 RML28_CHICKEN 1 -----MRTLDLIDQAYGDFYILKTPKADMCSKLGMDLKRGMLLR-LARRDPKLHP
 RL28_THET8 1 -----MSKVCEISG---KRPVANSIQRRGKAKRE
 RL28_ECOLI 1 -----SRVCQVTG---KRPVTGN---NRSHALN-

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RML28_DOG 180 DNPQKRAAIFDKYKFAFVIPEAAEAEWVGLTLEAVEKQRLLEEKDPTPLFKVYVEELIGQL
 RML28_BOVINE 178 DDPERRAAIYDKYKFAFVIPEAAEAEWVGLTLEAVEKQRLLEEKDVPVPLFKVYVEELVEQL
 RML28_HUMAN 179 EDPERRAAIYDKYKFAFVIPEAAEAEWVGLTLEEAIEKQRLLEEKDVPVPLFKIYVAELIQQL
 RML28_MOUSE 179 ENPERRAAIYDKYRSFVIPEAAEAEWVGLTLEEAIEKQRLLEEKDVPVPLFKVYVEELVQRL
 RML28_CHICKEN 51 DDPARRAAIYNYKYREFVIPEAAEAEWVGLSLEEAIEKQRLLEKQDPVPLFKVYAEELVNQL
 RL28_THET8 28 GVGKKTGTGISKRROY--PNLQKVRVAVAGQE--ITFRVAASHIPK-VYELVERAKGLKL
 RL28_ECOLI 23 -----ATKRRFL--PNLHSHRFWVSEKRFVTLRVSAKGMR-----VIDKKGIDT

RML28_DOG 240 EQQALSEPVVQKRASRE-
 RML28_BOVINE 238 QQQALSEPVVQKRANRT-
 RML28_HUMAN 239 QQQALSEPVVQKRASGQ-
 RML28_MOUSE 239 QEQVLSRPVVQKRAGDHA
 RML28_CHICKEN 111 KEQALEK----EKERNV--
 RL28_THET8 83 EGLSPKE---LRARGEKY-
 RL28_ECOLI 66 V---LAE---LRARGEKY-

MRPL40 (Also known as MRP-L37)

RML40_DOG 1 MALASGPARRALVLPARLGLGDCGAPA-RGAYEWGVRSTRKPEPRPLNRYVDIP-----
 RML40_BOVINE 1 MALASGPARRVLPWPWGLGLECGGVPR-RGAYEWGVRSTRKPEPPPLDRVYEIP-----
 RML40_HUMAN 1 MALASGPARRALAGSGQLGLGGFGAPR-RGAYEWGVRSTRKSEPPPLDRVYEIP-----
 RML40_MOUSE 1 MALASGPALRALAGSRLGLGGYGTPK-RGAYEWGVRSTRKPEPRPLDRVYEIP-----
 RML40_CHICKEN 1 MALRPVVLRRAPAHSRGI-LTRPGPPRRCGLPRTPTWITRGGPPDQLARVVERRPVREQV

RML40_DOG 54 GLEPITYAGKMHFMPGLARPVFPWDPGWTHPKFRRPTPVHEQPLYKDRV CYVFHQRCRL
 RML40_BOVINE 54 GLEPITFAGKMHFMPGLARPVFPWDPGWTHPKFRRLPPLQEHPLYKDEV CYIFHQRCRL
 RML40_MOUSE 54 GLEPITYEAGKMHFVPLARPIFPWDRGWNDPRFHRAAPIHEQTLYKEEPCYIFHQRCRL
 RML40_HUMAN 54 GLEPITFAGKMHFVPLARPIFPWDRGYKDPFRFYRSPPLHEHPLYKDAQACYIFHHRCL
 RML40_CHICKEN 60 ELDTVITYAGROYFVPLARPRFPWDRGWREPWHSPGPRYEDMPLRKERGCFICHQVRM

RML40_DOG 114 LEGVKQALWLTKAKLIEGLPEKVLVSLVSDPKNYIENQDERVLNVISHARLWHSTEDTPKR
 RML40_BOVINE 114 LEGVKQALWLTKTKLIEGLPEKVLSLADNPRNHIENQDERVLNVISHARLWHSTEDIPKR
 RML40_HUMAN 114 LEGVKQALWLTKTKLIEGLPEKVLVSLVDDPRNHIENQDECVLNVISHARLWQTTEEIPKR
 RML40_MOUSE 114 LEGMKQALWLTKTKLIEGLPKKVLVSLVDDPANHIENQEQRVLDIISHARLWHSTEDIPKR
 RML40_CHICKEN 120 LEGVRQAQWLTKTKLVQGLPAKVLVSLAENPAYQLQEQEEAVHRAVAHARLWETTEVSPRR

RML40_DOG 174 EAYCPVIVDSLIQLCKSQILKHPSLIRRIYAKNYTFSTTWNRESFLLQVCGPSGARLNSK
 RML40_BOVINE 174 ETYCPVIVDSLIQLCKSQILKHPSLARRICAQKNMLSTTWKRESTLIQVHGSSGAQLNAK
 RML40_HUMAN 174 ETYCPVIVDNLIQCKSQILKHPSLARRICVQNSTFSATWNRESLLLQVRGSGGARLSTK
 RML40_MOUSE 174 ETYCPVIVDSLIQLCKSQILKHPSLARRISAQNCTLATTWNRESLLLQVRGTSSTILSAK
 RML40_CHICKEN 180 EKYCPVIFEDLIHLCRSMSVKYPSLARRMLARNYRIAATWERESTLLQIRGLNGILMNSM

RML40_DOG 234 DPLPAIASREEVEATKNHILEAFYPISTIDLQECNVYDVEDNTGFOEGYPYPYPHTLYF
 RML40_BOVINE 234 DPLPIIASREEVEATKNHVLETFSPISPTISLQECHIYDVNDDTGFREGYPYPCPHTLYL
 RML40_HUMAN 234 DPLPTIASREEVEATKNHVLETFYPISPIIDLHECNIYDVKNDDTGFQEGYPYPYPHTLYL
 RML40_MOUSE 234 DPLVPIASREEVEATRSHVLETFYPISTIDLQECHVYEVKDDTGFQEGYPYPPHTLYF
 RML40_CHICKEN 240 TPVPPVASKEEILATKDHVLETFYPISTIDLQEVNVYQELNDTGFKDGYPYSHPHHTLYF

RML40_DOG 294 LETANLRPHRFRRPDQLRAKMILFAFGNALVQARRLYGNHTKVLEQPVVVQSVGTDGRVFQ
 RML40_BOVINE 294 LESANLRPHRFRRPDQLRAKMILFAFGNALAQARLLYGNDPKVLEQPVVVQSVGTDGRVFQ
 RML40_HUMAN 294 LDKANLRPHRLOPDQLRAKMILFAFGSALAARLLYGNDAKVLEQPVVVQSVGTDGRVFH
 RML40_MOUSE 294 LEKANLRPQRFRLPEQLRAKMILFAFANALAQARLLYGNTAKVLEQPIVVQSVGTDGRVFQ
 RML40_CHICKEN 300 LESANRPNRFRPEQLRAKMILFAFGNALAKAKVLYGNDPQVLEQPIVVQSVGTDGQLFQ

RML40_DOG 354 FLVLQLNNTDLASNDGIKNLVVWVSDQLLYQHFWRPVIKKKVVVEPVGPTGFQPETFRK
 RML40_BOVINE 354 FLVLQLNNTDLASEG IKNLVVWVSDQLLYQHFWCLPVIKKKVVVEPVGPTGFQPETFRK
 RML40_HUMAN 354 FLVFLQLNNTDLDCNEGKNLAVWVSDQLLYQHFWCLPVIKKRVVVEPVGPGFKPETFRK
 RML40_MOUSE 354 FLVLQLNNTDLASSEGKKNLVWVSDQLLYRHFWCRPVIKKKVVVEPVGPDVDFQPETFRK
 RML40_CHICKEN 360 FLVFLQLNNTDLVSNDDGIKNLVWVSDQNLYESAQCVPEVKKRVVTKPTGIYGLQPETFKK

RML40_DOG 414 FLALYLHGAV
 RML40_BOVINE 414 FLALYLHGAV
 RML40_HUMAN 414 FLALYLHGAA
 RML40_MOUSE 414 FLALYLHGVV
 RML40_CHICKEN 420 FLALYLHGTV

MRPL43

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RML43_DOG      1  MTARGTPSRFLASVLYNGLGRYVQQLQRLSFLNLSRDAPSSRGAREFVEREVADDFARRNPG
RML43_BOVINE   1  MTARGTASRFLTSVLHNGLGRYVQQLQRLSFSLSRDAPSSRGAREFVEREVDDFARRNPG
RML43_HUMAN    1  MTARGTPSRFLASVLYNGLGRYVQQLQRLSFSVSRDCASSRGAREFVEREVIDDFARRNPG
RML43_MOUSE    1  --GRGTSSRFLTSVLHNGLGRYVQQLQRLSLSSRDAPSSRGAREFVEREVDDFARRNPG
RML43_CHICKEN  1  MTGRGTASRFLAAVLHNGVGRYVRQLQLQVVFSPVAPDARGARQFVEEEAVDFARRHPD
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RML43_DOG      61  VVIYVNSRPCCVPRVVAEYLNGAVREESIHCKSVEETIATLVQKLANQSGLDVIRIRKPFH
RML43_BOVINE   61  VVIYVNPRPCCVPRVVAEYLNGAVREESLNCKSVEETIATLVQKLADQSGLDVIRIRKPFH
RML43_HUMAN    61  VVIYVNSRPCCVPRVVAEYLNGAVREESIHCKSVEETISTLVQKLADQSGLDVIRIRKPFH
RML43_MOUSE    59  VVIYVNPRPCAMPRIVAEYLNGAVREENVNSKSVEETIKSLVQKLADQSGLDVIRIRKPFH
RML43_CHICKEN  61  VVIYVRPCCECPAVLQAEYLNGTVREELIASKTSEEIVQLAAKLASQSGLDIVIRIRKPFH
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RML43_DOG      121  TDSPSIQGQWHPFTNKPTMLGGLRPREVODAALAQ-----AQVP-----
RML43_BOVINE   121  TDSPSIQGQWHPFTNKPTALGGLRPREVONPAPTOR-----PAQ-----
RML43_HUMAN    121  TDNPSIQGQWHPFTNKPTFRGLRPREVODPAPAQDTGLRLSAVAPQILLPGWPDPPDLP
RML43_MOUSE    119  TDNPSIQGQWHPFTNKRTALHGLRPRELRDSAPAS-----MQAQ-----
RML43_CHICKEN  121  TANPSVQGQWHPLTKPSALTVRGPR----AAPQ-----
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RML43_HUMAN    181  TVDPISSSLTSAPAPMLSAVSCLPIVPALTTVCSA
RML43_DOG      -----
RML43_BOVINE   -----
RML43_MOUSE    -----
RML43_CHICKEN  -----
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MRPL45

RML45_DOG 1 MAAPTPRGLHCLSKALGWWSRQPVLVTSQSTVVPVVRTKKRFTPTTYEPKYKSEKEFMEYA
RML45_BOVINE 1 MAAPLPRSLSCLSRVAGWWSRQPIILMTQSTAVVPVVRTKKRFTPPIYQPKYKTEKEFTTEYA
RML45_HUMAN 1 MAAPTPQGFSCLSRFLGWWRQPVLVTSQAATVPVVRTKKRFTPPIYQPKFKTEKEFMQHA
RML45_MOUSE 1 MAAPVPRGLSSLYRTLGLWWSRQPIILVTSQSTVVPVVRTKRSRFRPPTPEPKYKTEKEFLEYA
RML45_CHICKEN 1 MAAAMAAGLSRLGRGAMESLLRPPRAVPAFLVVPVVRTKRRLFVPEWARELPHE-EKEKRL

RML45_DOG 61 RKAGLVIPPERLERPLHLACTAGIFDAYVPPEGDARLSSLAKEGLAQRSEQLKKKVASQL
RML45_BOVINE 61 RKAGLVIPQESLERPIHLACTASIFDAYVPPEGDARVSSLSKEGLAQRTERLKKNVASQL
RML45_HUMAN 61 RKAGLVIPPEKSDRSIHLACTAGIFDAYVPPEGDARISLSKEGLIERTERMKKTMASQV
RML45_MOUSE 61 RKAGLVIPQERLERPIHLACTAGIFDPYVPPEGDARMSSLSKEGLTQRTERLRKNAASQL
RML45_CHICKEN 60 QSLIRTLPEERMERTFYLACTASTIDPYVPPEGDARVTSLSKEGLKQRMKELKQTAASQL

RML45_DOG 121 SIRKIREHDPNFKIKDFPEKAKDIFIEAHLCLNNSDHDRHLHTLVTEHCFPDMVWDIKYKT
RML45_BOVINE 121 SIRRIKESDPNFVKDFPEKAQDIFIEAHLCLNNSDHDRHLHTLVTEHCFPDMVWDIKYKT
RML45_HUMAN 121 SIRRIKDYDANFKIKDFPQKAKDIFIEAHLCLNNSDHDRHLHTLVTEHCFPDMTWDIKYKT
RML45_MOUSE 121 AIRKIREFDTNFKTKDFPEKAKDIFIEAHLCLNNSDHDRHLHTLVTEHCFPDMVWDIKYKT
RML45_CHICKEN 120 AIRKVKDHDPNFSTKTFPEVAQEIYVEAHNSLANFNKQKLHLSLVTERCYPDMVVRGNRYKT

RML45_DOG 181 VRWSFVESLEPPQVVQVRCSNLLNQGNTIYGQVTVRMHTRQTLAIYDRFGRLMYGQEDVPR
RML45_BOVINE 181 VRWSFVESLEPPQVVQVRCSSLVTKSNAYGQVTVRMHTRQTLAIYDRFGRLMYGQEDVPR
RML45_HUMAN 181 VRWSFVESLEPESHVVQVRCSSMNOGNVYGOITVRMHTRQTLAIYDRFGRLMYGQEDVPK
RML45_MOUSE 181 VRWGFVESLEPAQVVHVRCSSGLVNOGNMYGQVTVRLHTRQTLAIYDRFGRLMYGQEDVPK
RML45_CHICKEN 180 TRWSFVESLEPPRVAVHVRCTSVVNOGNLYGQVTVRMHTRQTLAIYDRFGRLMYGGKELPK

RML45_DOG 241 DVLEYVVFEEKHLVNPYGSWRMHGKTIIPWAPHKQPIPKTVMIPGPQPKPWEDYEEPOGEA
RML45_BOVINE 241 DVLEYVVFEEKHLANPYGSWRMHGKIVPPWAPPKQPIPKTVMIPGPQPKPGEEYEELQREA
RML45_HUMAN 241 DVLEYVVFEEKQLTNPYGSWRMHTKIVPPWAPPKQPIPKTVMIPGPQPKPEEEYEEAQGEA
RML45_MOUSE 241 DVLEYVVFERHLNPNYGSWRMHAKIVPAWAPPKQPIPKTLMIPGPQPKPWEEYEETQGEA
RML45_CHICKEN 240 DVLEYVVFERYLVNPGYTWRMHGKIVPEWAPPKDPIVKKVRV-----

RML45_DOG 301 HKL---

RML45_BOVINE 301 HKPQLA

RML45_HUMAN 301 QKPQLA

RML45_MOUSE 301 QKPQLA

RML45_CHICKEN -----

MRPL49

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RML49_DOG      1  MESRKRKGRCAQEGAGRSWLRAQAASVREQFKMAAAVFRATLRGWRTGVPPGCLRRLRLSQ
RML49_BOVINE  1  -----MAAAVFWVLRGWRTGVPPGCGLRRLSQ
RML49_HUMAN   1  -----MAATMFRATLRGWRTGVQRGCGLRRLSQ
RML49_MOUSE   1  -----MAAAVLRALQDWRSCLGRSYGRRKLSQ
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RML49_DOG      61  TQGPPDYPSEFVESVDEYQFVERLLPPTSIPEPPKHEHYPTPSGWQPPRDPPPNLPLYFVRR
RML49_BOVINE  29  TQGTDPYPRFLESVDEYRFVERLLPPTSIKPPKHEHYPTPCGWQPPRDPPPNLPLYFVRR
RML49_HUMAN   29  TQGPPDYPRFVESVDEYQFVERLLPATRIPDPPKHEHYPTPSGWQPPRDPPPNLPLYFVRR
RML49_MOUSE   29  TQGPPDNPGFVESVDEYQFVERLLPPTKIPEPPKHKHYPTPSGWQPPRDPLPSLPYFVRR
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RML49_DOG      121 SRMHNIPVYKDITHGNRQMTVIRKVEGDIWALQKDVEDFLSLLLGKTPVTQINEVTGTLR
RML49_BOVINE   89  SRMHNIPVYRDITHGNRQMTVIRKVEGDIWALQKDVEDFLSPLLGKTPITQVNEVTGTLR
RML49_HUMAN    89  SRMHNIPVYKDITHGNRQMTVIRKVEGDIWALQKDVEDFLSPLLGKTPVTQVNEVTGTLR
RML49_MOUSE    89  SRMHNIPVYKEITHGNRQMTLIRKVEGDIWALQKDVEEFLSPLLGKTPITQVNEVTGTLR
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RML49_DOG      181  VKGYFDQQLKAWLLEKGF
RML49_BOVINE   149  IKGYFDQQLKAWLLEKGF
RML49_HUMAN    149  IKGYFDQELKAWLLEKGF
RML49_MOUSE    149  IKGYFDEQLKAWLLEKGF
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