```
CLUSTAL X (1.81) multiple sequence alignment
MdTLR7          ------------------------FHIYLFVHRICPLLASFLLLLFQIFHVRGLYRSF
hTLR7          --------------------------------------------------MVFPMWTLKRQI
chTLR7         ----------------------------------------------MTNLSEVAAHRKMVHHARTSN
XtTLR7         ---------------------------------------------------------MRRQL
tetTLR7        ------------------------------------------------------------
fTLR7          ------------------------------------------------------------
hTLR8          -------------------------------MKESSLQNSSCSLGKETKKENMFLQS
pigTLR8        ----------------------------------------------------MTLHF
mTLR8          ------------------------------------------------MENMPPQS
MdTLR8         -------------------------------------------------MIPQY
XtTLR8         ------------------------IKLLFGLHSCNYYTANILFFSPQAKMTGSL
tetTLR8        ------------------------------------------------------------
fTLR8          ------------------------------------------------------------
hTLR9          ------------------------------------------------------------
pigTLR9        ---------------------------------------------------MGPRCT
mTLR9          ----------------------------------------------------MVLRRRT
ratTLR9        ----------------------------------------------------MVLCSRT
MdTLR9         ------------------------------------------------------------
fTLR9          -----------------------------------------------------------M
tetTLR9        ------------------------------------------------------------
XtTLR9         -----------------------------------------YLHLYNIVSLHAQQK
mTLR3          ------------------------------------------MKGCSSYLMYSFG
hTLR3          ----------------------------------------------MR-QTLPCIYFWG
MdTLR3         -----------------------------------------------MERCLIHWSYFFL
chTLR3         ------------------------MTLSSAVEESLATKRKESKGLIFLKINRGYKLG
XtTLR3         ----------------------------------------MGQLWLSLHILYAIY
fTLR3          -----------------------------------------------------------M
tetTLR3        ------------------------------------------------------------
zebTLR3        ---------------------------------------MDLMKLILLPLFYACF
cfishTLR3      ------------------------------------------------------------
hTLR5          -----------------------------------------------------MGDH
mTLR5          -----------------------------------------------------MACQ
MdTLR5         -----------------------------------------------------MGHL
XlTLR5         --------------------------------------------------MDSSAPAAA
XtTLR5         ---------------------------------------------------------LCSF
fTLR5          ------------------------------------------------------MTTS
tetTLR5        ------------------------------------------------------------
troutTLR5      -----------------------------------------------------MMRN
mTLR13         -------MPKTVKMNGSSFVPSLQLLLMLVGFSLPPVAETYGFNKCTQYEFDIHHVLCIR
ratTLR13       -------------MCGSSVVPSLQLLLMLIGLSLLSLAETYGFNKCTQYEFDIHHVFCIR
MdTLR13        -----------MGPKARGMPLKWLWFIVLEFSLLSLVEMYGFRHCTQYKFNIHHVLCVR
XtTLR13        ------------MPFHWTCPIAALMTLILQP--ISFIECYGYRKCSLEGIHTEYANCVG
chTLR21        ------------MCPSHCCPLWLLLLVTVTLMP--MVHPYGFRNCIEDVKAPLYFRCIQ
XtTLR21        ----------------MAILLVALTFVVLLIP--GLTSYGFRNCIQSSVIINSYNCIA
fTLR21         ----------------MWSLSFPLLSVTVLLCATRLVGGYSFHNCIEFSKGK-TFKCIH
fTLR23         ----------------MLTWSPPVLLCLLLHLRSSISFSLK-NCTVHAGGAS-AEVFVD
tetTLR23       ----------------MVTWSP--LLLLLLLRLRTSFGFSLK-NCTVHAGPAP-AVVLVD
fTLR22         MGSRIK--------RSTFFFSPAFFLLSFSQFVIPLKGFALKNACKISFNVAI-----CS
tetTLR22       ------------------------------------------------------------
halTLR22       MGPGGKGDERETGGRKHFQLVTFFFLLTISSLLAPISGFALK-TCRISYNIAK-----CD
troutTLR22     MTLKITMPGEQSGSTFSQLRLFLCFLMYCWVLADPVCGYFLN-NCTIRGNLSDNFNMKVL
XtTLR22        ----------MGWLMLQFKMFSLFNCLVLFHLVTRGVSFAIK-GCEVHRQYNL----KVL
mTLR12         ------------MGRYWLLPGLLLSLPLVTG--------WSTSNCLVTEGSRLPLVSRY
mTLR11         ----------MPRMERHQFCSVLLILILLLTLVSLTLTGWAWTIPDCIIADSLLFPNLSYY
hTLR4          ---------------------------------------------------------MKPRA
rabbitTLR4     ---------------------------------------------------------MMPR-
pigTLR4        ---------------------------------------------------------MIPR-
mTLR4          ---------------------------------------------------------MMPP-
MdTLR4         ---------------------------------------------------------MPAI
chTLR4         ---------------------------------------------------------LHKLP
XtTLR4         ---------------------------------------------------------------H
zebTLR4        ------------------------------------------------------------
hTLR2          ---------------------------------------------------------MPHTL
rabbitTLR2     ---------------------------------------------------------MPPAL
pigTLR2        ---------------------------------------------------------MPCAL
mTLR2          ---------------------------------------------------------MLRAL
MdTLR2         ---------------------------------------------------------MRQIR
chTLR2         -----------------------------------------------MFNQSKQKPTMKLM
XtTLR2         ---------------------------------------------------------MMQSIS
fTLR2          -----------------------------------------------------------M
halTLR2        ---------------------------------------------------------MGQQMIPL
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zebTLR2      --------------------------------------------------------MRLVGTM
hTLR1        ------------------------------------------------------------MT
mTLR1        ------------------------------------------------------------MT
hTLR6        ------------------------------------------------------------MT
pigTLR6      ------------------------------------------------------------MT
mTLR6        ---------------------------------------------------MVKSLWDSLCNMS
MdTLR1L      ----------------------------------------------------MCTTKLWF
hTLR10       -----------------------------------------------------------
ratTLR10     -----------------------------------------------------------
MdTLR10      -----------------------------------------------------------
chTLR1L1     -----------------------------------------------------------
XtTLR1L3     --------------------------------------------------------MRVH
XtTLR1L1     -----------------------------------------------------------
XtTLR1L2     -----------------------------------------------------------
fTLR1        ------------------------------------------------------MSQNSF
tetTLR1      -----------------------------------------------------------
tetTLR14     ------------------------------------------------MICIFLH------
fTLR14       ------------------------------------------------MIWTFVH-------
XtTLR14      -------------------------------------------------MEKLSH-------
XtTLR14L1    ------------------------------------------------MNPVLQ-------
XtTLR14L2    ---------------------------------------------QVPFLQNLFFPNR
XtTLR14L3    ------------------------------------------------MEMFRR-------
XtTLR16      -------------------------------------MDLCFKRKHWKTCYYLIGCIL
chTLR15      ----------------------------------------------------------MRI


MdTLR7       LILFHLFILY----KLPRARWFPKTLPCNVTQNIMEASVMVNCTEKHLTEIP--------
hTLR7        LILFNIILIS----KLLGARWFPKTLPCDVTLDVPKNHVIVDCTDKHLTEIP--------
chTLR7       ALLFVLLFLFP--MLLSGRWFPKTLPCDV--EAFESTVRVDCSDRRLKEVP--------
XtTLR7       LFFLISILSFS---GLLATNWFPKSLPCDVEQNAKGNVIVVDCSDRHLTSIP--------
tetTLR7      MFFFLILGICCPLCILTANVSYPKTLPCDVT--NNGSVVNVDCTERSLTDVP--------
fTLR7        MFLLLILGLWCPLCILTANVSYPKTLPCDVT--NNGSVVNVDCTERSLKGVP--------
hTLR8        SMLTCIFLLISGSCELCAEENFSRSYPCDEKK--QNDSVIAECSNRRLQEVP--------
pigTLR8      LLLTCLFLLIPDSCEFFTGANYSRSYPCDERK--ENGSVIAECTNRQLQEVP--------
mTLR8        WILTCFCLLSSGTSAIFHKANYSRSYPCDEIR--HNSLVIAECNHRQLHEVP--------
MdTLR8       LSFTCLCLLVACSPEVLDHIVNSRGYPCSFRK--NNSFVFADCQGCRLHSVP--------
XtTLR8       QTLVLVVLITCNSLECSDTNPNNRTIPCKIAE--NGSSVSFDCSARWLQMVP--------
tetTLR8      MLLSCLCWISEIHRAECTPAWLQPQFPCRVTG-HNYSRVSFDCSGRHLHRVP--------
fTLR8        MLLSCLSWLSELHHAACKPTWLLPQFPCQVTG-YNSSSVFFDCSRRHLHQVP--------
hTLR9        -----------------------------------------------------------
pigTLR9      LHPLSLLVQVTALAATLAQGRLPAFLPCELQP-----HGLVNCNWLFLKSVPH-----FS
mTLR9        LHPLSLLVQAAVLAETLALGTLPAFLPCELKP-----HGLVDCNWLFLKSVPR-----FS
ratTLR9      LHPLSLLVQAAVLAEALALGTLPAFLPCELKP-----HGLVDCNWLFLKSVPH-----FS
MdTLR9       -------MSLLALARALAHTSFPQFLPCELRN-----SSVVDCDRRSLGSVPP-----FF
fTLR9        RFLILCQLLPIVS------SINPIFLPCDTDAN----TSRVDCSDRPLRRVP--------
tetTLR9      --------------------PIFLPCDTDVN----TTRVDCSDRHITHVP--------
XtTLR9       RKVFLPLSLGLILGVCLAFCKIPHFLPCDDFNN----ASTVICRERQLIHVP--------
mTLR3        G------------LLSLWILLVSSTNQCTVRY------NVADCSHLKLTHIP--------
hTLR3        G-----------LLPFGMLCASSTTKCTVSH------EVADCSHLKLTQVP--------
MdTLR3       R-----------ILPFCMVCTQSVKNCVVRN------EVADCSHQKLTQIP--------
chTLR3       GDEPSKLDNVQKADMVITSLKASVQDNYEVKNTWVSARAVTESLHSAPRRAPL-------
XtTLR3       G---------------MSLVAGNPCKITED-----LTADCSHLKLSAIP--------
fTLR3        T------------GRRHAVYGQKKTSCVVQG------SSADCSHLSLSSIP--------
tetTLR3      ----------------------SSCRVQG------DSADCSHLSLDSIP--------
zebTLR3      S------------AHCAGTTNARKSACMIKN------AKADCSHMNLDAIP--------
cfishTLR3    -----------------------------------------------------------
hTLR5        LDLLLGVVLMAGPVFG--------IPSCSFDG------RIAFYRFCNLTQVP--------
mTLR5        LDLLIGVIFMASPVLV--------ISPCSSDG------RIAFFRGCNLTQIP--------
MdTLR5       LAFLLGLVFKATSVYG-------IPSCSADG------QLAFYRFCNLTQVP--------
XlTLR5       YNYRIILFYQLTVIIGGSALALDMMTPCSSIN------RMANFKFCNLTRMP--------
XtTLR5       FLFRVTLFYKLIAIIGGSALAFGQIPKCTTTN------RIAYFFYCNLTHMP--------
fTLR5        ALHLVFLWWNLQVSTCY-------PSCTLSG------LIANCAFKNHSWVP--------
tetTLR5      ------------------------PSCTLYL------LVADCAFKDHLWVP--------
troutTLR5    LILLAIFGEYLQVVKCN--------PKCPIYG------SIAACTSQSLYQVP--------
mTLR13       KKITNLTEAISDIPRYTTHLNLTHNEIQVLPPWSFTNLSALVDLRLEWNSIWK-----ID
ratTLR13     KKITNLTEAISDIPRYTTHLNLTNNYIQVLPPWSFTNLSALVDLRLEWNLIWK-----ID
MdTLR13      KNITNLKESIHDLPEYVTHLNLTHNQIQTVPSRSFVNLSNLVDLRLEWNFIWD-----LG
XtTLR13      QSVVTLADAIQDLPYQTRVLNISENEISKIDGYTFSHLPKLQELVLRKNKVNG-----VD
chTLR21      RFLQSPALAVSDLPPHAIALNLSYNKMRCLQPSAFAHLTQLHTLDLTYNLLET-----LS
XtTLR21      RGLTDVKSAVGDLPSDVWYLNISYNNIQTLHQGSFGHMPFLRTLRLNHNQLQR-----LD
fTLR21       RNQYILGDIIKDLPHSTLDLTIAVNPVSHIPDRSFIHLRNLQQLRLDHNHLGV-----ID
fTLR23       CASRELLTVPDDVPRDATTVKLSYNLLTQVKRNDVEHLTKVKFLDLQSNEIAH-----ID
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tetTLR23     CSNHRLLSVPDDLPRDATAVNLGYNLLTQVRRNQLQGLTQLKVLDLQSNAIVH-----VE
fTLR22       GNFVKLQDVPQDIPPTVKGFDLSTNKISRIRTTDFKEFRLLEVLDLKNNIISQ-----VD
tetTLR22     ------------------------------------------------------------
halTLR22     K--MGLTAAPRDIPSAVKGFDLSENKILRVLVSDFENLPGLTQLDLNRNFISQ-----ID
troutTLR22   CYNRNIEVMPINIPCKVSVLDVAMNNISKIRRLDFKGLSNLKILNMSRNQISQ-----VD
XtTLR22      CYNRDLTKVPAQLPELSFMLDLSHNIIKTINRTDFQNLTVLQNLNLSNNRIQY-----ME
mTLR12       FTFCRHS-KLSFLAACLSVSNLT---------QTLEVVPRTVEGLCLGGTVST-----LL
mTLR11       IPFCTSAPGLHLLASCSNVKNLN---------QTLKRVPRNTEVLCLQGMVPT-----LP
hTLR4        FRLR-SLSPSP---------------------RFHCFLLNAAV--------LSR
rabbitTLR4   LRLAGTLVPAMAFLSYLRPEIWEPCVEVVPNI-------TYQCMEKNLYK-------IPD
pigTLR4      IRLAVATIPAMAFLSCLRSESWDPCVQVVPNI-------SYQCMELNFYK-------IPD
mTLR4        WLLARTLIMAL-FFSCLTPGSLNPCIEVVPNI-------TYQCMDQKLSK-------VPD
MdTLR4       SACLISLLRHIHLLY-----------------------HICMGSWVGR-------ILS
chTLR4       FGLHSSVLSAFSTLQLLPEQDLPGSFGRLNDAP---YEATYKLLQLNASSKRYAGFGYPG
XtTLR4       FFVAITLYLKVVFLH-----------------------------------------
zebTLR4      MSNGERMIFLSSILILVNAGQGQECTELIKNK-------EYSCSGRNLTC-------IPG
hTLR2        WMVWVLGVIIS--LSKEESSNQAS-LSCDRNG-------ICKGSSGSLNSIPSG------
rabbitTLR2   WTVWALGAIVS--LPTEGAPDLPS-LSCDPAG-------ICDGRSRSFQSIPSG------
pigTLR2      WTAWVLGIVIS--LSKEGAPHQASSLSCDPAG-------VCDGRSRSLSSIPSG------
mTLR2        WLFWILVAITV--LFSKRCSAQES-LSCDASG-------VCDGRSRSFTSIPSG------
MdTLR2       WSVWILCTIIN--FSEEDAPKQTS-LSCDPAGG------VCDGHSRSLDTIPSD------
chTLR2       WQAWLIYTALAAHLPEEQALRQAC-LSCDATQS-------CNCSFMGLDFIPPG------
XtTLR2       LSCLILSLVVT-----VLSKGNTDCPCDAAH-------FCHCSSMHWEAIPSG------
fTLR2        FFTLLFTLSFCEGQGSIVKVDRPSCDRCDHSFF-------CNCSFAGLTCVPVV------
halTLR2      FTLLPLLLSLCGGQSS--NPGRPSCRSCDLHLS-------CDCSRGQFTHVPIV------
zebTLR2      TAIILIMFILAQGLEC-----SQTCK-CDQMYF-------CNCSSNNLHQVPTV------
hTLR1        -------SIFHFAIIFMLILQIRIQLSEESEF-------LVDRSKNGLIHVPKD------
mTLR1        KPN----SLIFYCIIVLGLTLMKIQLSEECEL-------IIKRPNANLTRVPKD------
hTLR6        KDKEPIVKSFHFVCLMIIIVGTRIQFSDGNEF-------AVDKSKRGLIHVPKD------
pigTLR6      KDKKPTVISLHSVYVMTLVWGTLIQFSEESEF-------VVDKSKIGLTRVPKD------
mTLR6        QDRKPIVGSFHFVCALALIVGSMTPFSNELES-------MVDYSNRNLTHVPKD------
MdTLR1L      IPDPPIINTFHFVLIFVLILGSVIQHSSQNEF-------IGNYSNSHLSHVPHH------
hTLR10       --MRLIRNIYIFCSIVMTAEGDAPELPEEREL-------MTNCSNMSLRKVPAD------
ratTLR10     --MRLISSIYTLYNIIMSTEAWAPRPTDEREL-------ISNYSNMALRKVPPD------
MdTLR10      --MGIIRNIYILYSIDLSVLCGALLLPEMNEL-------TTNCSQEYFKKVLMG------
chTLR1L1     --MGSLTSIYVFACVFLSILWNNIQPTVENKI-------TANYSGHLLTEVPKN------
XtTLR1L3     AAEYNLYFLFAIIIYILAQ--------FESNK--------ALIIQRKLHKCFSS------
XtTLR1L1     ---------MLSIYILVQ--------SESSK--------ASFIHRRLPRGLSN------
XtTLR1L2     -----MAAIFFLLIYLSSSGQCVRQEIFESHI--------ANYSNKFLFAVPKN------
fTLR1        CPLVLFRLMMGSTIAIFCAAAMLMPQLSVSYLRN-----YIDLSSRNLSSVPGD------
tetTLR1      ---------MGPSILVFCTAATLMLQPSVSYLRN-----YIDLSSRNLSSVPGD------
tetTLR14     --------FGALVVGALTSVTPPPPSTTDAR--LCRVFNSGRSADCVGRQLESVPW----
fTLR14       --------FIALAVGVLASTTPSPPSTTKTVTGFCRVFNSGRSADCLGMQLSSVPW----
XtTLR14      --------HERLVILCILALGLVERAQGQTP---CKTDG--IYANCKGRSLAAVP-----
XtTLR14L1    --------NGQLGLWCVLVLGLVRELWCQTP---CLVDESRRFVSCSGRNLVEIP-----
XtTLR14L2    CEDPGRVSAQQKVHVCFLLLNLLKWTSCQNP---CQRDSTNRYANCQGQDLVEVP-----
XtTLR14L3    --------YNEPVFYCFLLLALTKGIWSQNS---CQVDEKQKYANCQGQNLNDVP-----
XtTLR16      LFLPSISFGWTVKKCNVADRSMLLRDPMFATRCSLYKNATSLALCGNITNITADIS----
chTLR15      LIGSLYFYFISFLFSKVNGFLTQRTSPVSSFP-------FYNYSYLNLSSVSQA------


MdTLR7       ---NGIPSNTTNLTLTINHIPKISPNSFAGLKNLVEIDFRCNCVPVRLGPKDRICTKRPN
hTLR7        ---GGIPTNTTNLTLTINHIPDISPASFHRLDHLVEIDFRCNCVPIPLGSKNNMCIKRLQ
chTLR7       ---RGIPGNATNLTLTINHIPRISPASFTQLENLVEIDFRCNCVPPRLGPKDNVCVTPPS
XtTLR7       ---WGIPTNVTNLTLTINHIPRISVDSFAEFTNLVELDFRCNCVPAKVGPKDHVCTKRLD
tetTLR7      ---HGIPRDVSNLTLTINHIPNFNSTSFQGLDNLREVDMRCNCVPVKIGPKDHICTKSVT
fTLR7        ---VGIPRDVSNLTLTINHIPNFNSSFQGLDNLREIDMRCNCVPVKIGPKDRICTESVT
hTLR8        ---QTVGKYVTELDLSDNFITHITNESFQGLQNLTKINLNHNPNVQHQNGNPGIQSNGLN
pigTLR8      ---RRVGNYVTELDLSDNFIRRITNESFQGLQNLTKINLNHNAKLWPQS-----ENGMT
mTLR8        ---QTIGKYVTNIDLSDNAITHITKESFQKLQNLTKIDLNHNAKQQHPNEN----KNGMN
MdTLR8       ----MIFKNVTEVDLSFNSIMEITNKSFAGLLNLTKINLNSNVDSQVENRAN---KRRMN
XtTLR8       -YPIKYSSDSVELLLSQNLILTINNESFHSWHNLTKIDLNWNHYPKSRLDNADICKRGLE
tetTLR8      ---KGITSNTTDLNLSENLIKELLPLAFSTLRNLSRLNLSWANK----------NRGLI
fTLR8        ---KGITSNTTDLNLSENSIKEISPLAFSTMWNLTKLNLSWANK----------KTGVN
hTLR9        MAAP--RGNVTSLSLSSNRIHHLHDSDFAHLPSLRHLNLKWNCPPVG--LSPMHFPCHMT
pigTLR9      AAAP--RANVTSLSLLSNRIHHLHDSDFVHLSSLRTLNLKWNCPPAG--LSPMHFPCHMT
mTLR9        AAAS--CSNITRLSLISNRIHHLHNSDFVHLSNLRQLNLKWNCPPTG--LSPLHFSCHMT
ratTLR9      AAEP--RSNITSLSLIANRIHHLHNLDFVHLPNVRQLNLKWNCPPPG--LSPLHFSCRMT
MdTLR9       EATPSALANVTTLLLRHNHINHLQPAHFVRLKGLQKLLLRWNCAPTI--LTVLRQSCHMV
fTLR9        LIKS---DTVTSLHLSRTKIRHLWQYDLSGVPNLRAFTMADNCQPSS--MKASLHDCEVK
tetTLR9      IIRS---NTVTSLRLSRTKIFQVGPDNLSHMPNLRVFIMADNCQPSG--MKATLHACKVE
XtTLR9       HIVS---QSVKVFDLAINEIRLLANSTFSGVPNLVILNLSDNCQPSN--LRPYKEICRLI
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mTLR3         ---DDLPSNITVLNLTHNQLRRLPPTNFTRYSQLAILDAGFNS--------------ISK
hTLR3         ---DDLPTNITVLNLTHNQLRRLPAANFTRYSQLTSLDVGFNT--------------ISK
MdTLR3        ---PDLPANITTLNLTHNQLKRLPPANLTRYGQLVILDGGFNS--------------ISK
chTLR3        SLSLLLPSPRRGLDISHNQLKKLDPENLTEYSNLIYLNAGYNI--------------ISK
XtTLR3        ---SDLPRNIKALDLSHNQLKKLPAANLSVYDQLERLDAGFNT--------------LHQ
fTLR3         ---PDLPRNLTSLDVSHNRLRGIPPESLRPYPGLLHLSVSYNT--------------IAK
tetTLR3       ---PDLPGNLTSLDMSHNRLRGIPPEALRPYPGLLRLIVNYNS--------------IAK
zebTLR3       ---TDLPTNITTLDVSHNRLKTLS--SLHMYTNLVNIDASYNS--------------LAG
cfishTLR3     ------------------------------------------------------------
hTLR5         ---QVLN-TTERLLLSFNYIRTVTASSFPFLEQLQLLELGSQYTP------------LT
mTLR5         ---WILNTTTERLLLSFNYISMVVATSFPLLERLQLLELGTQYAN------------LT
MdTLR5        ---QVPN-TTTKLLLSFNYIRVVNATSFPLLDQLQFLELGTQNIP------------LT
XlTLR5        ----LVSSDTLKLDLSFNYVSEINRTFFPKLYRLVDLNLGSQKTNR-----------LI
XtTLR5        ----PVNSDTLVLDLSFNYLSEVNSTFFPRLLQLVDLNLGSQQTER-----------LI
fTLR5         ----LLPPNITRLFLNTNRIGEINRTSLRLYQELEKLDLGHQQVP------------LV
tetTLR5       ----VLPPNITHLFLNTNLIGEVNSTSLSAYEQLEKLDLGHQKVA------------LV
troutTLR5     ----ALPPYITILYMRDNYISEINETSFSGLEGLKELDLSWQQVNG-----------LI
mTLR13        EGAFRGLENLTLLNLVENKIQSVN-NSFEGLSSLKTLLLSHNQIT------------H
ratTLR13      EGAFRGLENLTLLNLVENKIQSVN-NSFEGLSNLETLLLSHNQIT------------H
MdTLR13       PEAFQGLKNLTLLNLVENKLQSIN-SSFEGLSSLKTLLLSHNQIS------------W
XtTLR13       TWAFHNLNDLLILDLSYNLIQSLDTVDLTDLKHLQIFDLSHNRIH------------T
chTLR21       PGAFNGLGVLVVLDLSHNKLTTLAEGVFNSLGNLSSLQVQHNPLS------------T
XtTLR21       PGAFENLTMLEKLHLSSNKISNLSKEVFCGLQNVSWLFLDDNLLS------------S
fTLR21        QFAFQGLHQLKSLNLSFNYIPELSPSVFDGLHNLTFLSLTNNSLK------------R
fTLR23        DGSFLHMRSLTKLRLSKNKLSELTAQLFQGLSNLTHLDLSSNIIT------------F
tetTLR23      GGSFAHTGSLKTLELSRNKLTELAENLFQGLHELTSLDLSFNLIR------------F
fTLR22        EGAFINLRSLKKLNLNRNKLGKLDAGLFDGLQNLTELRVTRNRLK------------M
tetTLR22      ------------------------------------------------------------
halTLR22      DGAFANLIFLKELNLNNNKLVTLGENLFHGLSNLTELRIMSNGIK------------A
troutTLR22    NDALLPLKALRELNLAHNRLTTLSDHLFQGLDNLSLLHLDNNLIA------------T
XtTLR22       NGAFGKLVALQLLNLTKNRIGSLSSRTFEGLQNLSTLLLDNNNIV------------T
mTLR12        PDAFSAFPGLKVLALSLH-LTQLLPGALRGLGQLQSLSF-FDSPLRR----------SLF
mTLR11        AKAFIRFHSLQLLRLQLR-TTSVTSRTFQGLDQLQYLFFDHHAPCCL----------SLF
hTLR4         -----------------------------------------------------RCEIQT
rabbitTLR4    N----IPFSTKNLDLSFNLLEHLGSHSFLHVSELHFLDL--------------SRCKIHT
pigTLR4       N----IPTSVKILDLSFNYLSHLDSNSFSSFPELQVDLS--------------RCEIQT
mTLR4         D----IPSSTKNIDLSFNPLKILKSYSFSNFSELQWLDL--------------SRCEIET
MdTLR4        G---------------NFPLFKSCLFYTPILL-------------------CRCDIQK
chTLR4        NHDTTTPIHYYNTGLSRKNELFQHNLTAERNWLLKMIDHFSQVFIERQLLLHSKRYKMQN
XtTLR4        -----------------------------------------------------RCSITV
zebTLR4       S----LPFSVASLDFSFNFLTSLHKRVFPVMLNLQLLDLT-------------RCYIRQ
hTLR2         -----LTEAVKSLDLSNNRITYISNSDLQRCVNLQALVLTSNGIN------------T
rabbitTLR2    -----LMATVKSLDLSNNEITYIRDSDLHRCVHLRALMLMSNGID------------T
pigTLR2       -----LTAAVKSLDLSNNRIAYVGSSDLRKCVNLRALRLGANSIH------------T
mTLR2         -----LTAAMKSLDLSFNKITYIGHGDLRACANLQVLILKSSRIN------------T
MdTLR2        -----LTEAVRQLDLSFNKISHIRELDLRNCVNLEALLLQSNRIR------------S
chTLR2        -----LTGKITVLNLAHNRIKLIRTHDLQKAVNLRTLLLQSNQIS------------S
XtTLR2        -----LPRDVRGLNLSSNAIQIVTETDLQPYDQLQTLLLQYNAIH------------T
fTLR2         ------TEQALSLDLSFNNITVVTAEDLRDHRRLAALNLCCNRLA------------V
halTLR2       ------TSRALTLDLSFNNITMVTDVDLTGHERLRTLSLHGNRVA------------G
zebTLR2       ------PSDVLGLDLSFNQIESINMTDLSSYNELIILNLHKNKLR------------H
hTLR1         -----LSQKTTILNISQNYISELWTSDILSLSKLRILIISHNRIQ------------Y
mTLR1         -----LPLQTTTLDLSQNNISELQTSDILSLSKLRVLIMSYNRLQ------------Y
hTLR6         -----LPLKTKVLDMSQNYIAELQVSDMSFLSELTVLRLSHNRIQ------------L
pigTLR6       -----LPPQTKVLDVSQNFITELHLSDISFLSQLTVLRLSQNRMQ------------C
mTLR6         -----LPPRTKALSLSQNSISELRMPDISFLSELRVLRLSHNRIR------------S
MdTLR1L       -----LSPKTTVLDLSLNNITEIQIEDFKLLPKLRVLILSHNRIQ------------H
hTLR10        -----LTPATTTLDLSYNLLFQLQSSDFHSVSKLRVLILCHNRIQ------------Q
ratTLR10      -----VTPATTILDLSYNLLYQFQSSDCHSFSKLRFLILCHNSIQ------------Q
MdTLR10       -----MSLKITTMDLSNTFTCQPQNLDLSPFSKLKVLILSHNKIQ------------H
chTLR1L1      -----IPVHTHILDLSHNSISEITNFRFTSLSDLQVLNLSHNLIT------------E
XtTLR1L3      -----CPSVCTLLDFTKENITHLKTSDFNCFLQLRLLNLSHNLIG------------E
XtTLR1L1      -----CPSADTQLDFTKRNITQLQTSDFSCFLDLKFLNLSYNSIE------------E
XtTLR1L2      -----LSSLTTVLDISFNSIATMETSEFNYIFDLQVLNASYNKMK------------Y
fTLR1         -----LPKEAEYIDLSLNHIRQLKRGDFRNTPILRFLNISGNCLD------------S
tetTLR1       -----LPKEAELIDLSRNLIQLLQRGDFRNTPILRFLNISWNCLE------------S
tetTLR14      ---RHLPSSLEEIDLSYNKLQVIQAEDFSHFPKLHSLSLKYNNLS------------H
fTLR14        ---RQFPPSLEDIDLSYNRLQVINAEDFALFPRLRSLNLKYNNIS------------R
XtTLR14       ---KDLPTTLVELDLSYNRLSHIQFDDFASFTHLRALNLSYNNIS------------A
XtTLR14L1     ---KNFSVTLEELDMSFNRIFQIKSDDFSAYTNLRALNLSYNQIA------------T
XtTLR14L2     ---QDLPVTLQSLDLSYNRLFHIRYEDFSSYTNLRALNLSFNNIS------------T
XtTLR14L3     ---KDLPVTLEVLDLSCNWISQIRVDDFSSYTNLQALNLSFNNIS------------T
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XtTLR16        ----DVPSTINILCLSGS-NTFIPGGTFANFKRIKYLFMKMPLVR---------------
chTLR15        ----QAPKTARALNFSYNAIEKITKRDFEGFHVLEVLDLSHNHIK-------------D


MdTLR7         IDSGSFRNLTKLKSLYLDANQLSE-----IPLD---LPSSLQLLSLEANHIFSITRENLT
hTLR7          IKPRSFSGLTYLKSLYLDGNQLLE-----IPQG---LPPSLQLLSLEANNIFSIRKENLT
chTLR7         IENGSFAALTRLKSLYLDANQLSK-----IPRG---LPATLRLLSLEANNIFSIKKNTFS
XtTLR7         VEDRSFASLYNLRSLYLDGNQLIE-----FPKG---LPPNLQLLSLEINNIISISRNNLS
tetTLR7        IEENTFNSLKNLQSLYLDGNQLYS-----IPKG---LPSSLILLSLEVNHIYYISKANLS
fTLR7          IEENTFTSLRNLQSLYLDGNQLYI-----IPEG---LPSSLILLSLEVNHIYYISKANLS
hTLR8          ITDGAFLNLKNLRELLLEDNQLPQ-----IPSG---LPESLTELSLIQNNIYNITKEGIS
pigTLR8        ITDGAFLNHHLRELLLEDNQLRE-----IPTG---LPESLRELSLIQNKIILLNTKNMF
mTLR8          ITEGALLSLRNLTVLLLEDNQLYT-----IPAG---LPESLKELSLIQNNIFQVTKNNTF
MdTLR8         ISDGAFFNLKNLRDLLLEENLLQK-----IPVG---LPPSLTTLSLVLNNISSISKDNML
XtTLR8         IENGTFSYLTKLKEKLFIDHNYLCK-----IPQG---IPSTLTFLSLSYNNIFSVKKQILS
tetTLR8        IEENLFKNLTKLRELDLKGNGLRN-----IPWN---LPVSVRILKLGNNKILSLNANSLS
fTLR8          ISNNLFRNLTKLQHLRLSGNGMYR-----IPGN---IPVSVRILKMGNNKITSLDAHSLA
hTLR9          IEPSTFLAVPTLEELNLSYNNIMT-----VPA----LPKSLISLSLSHTNILMLDSASLA
pigTLR9        IEPNTFLAVPTLEELNLSYNSITT-----VPA----LPDSLVSLSLSRTNILVLDPTHLT
mTLR9          IEPRTFLAMRTLEELNLSYNGITT-----VPR----LPSSLVNLSLSHTNILVLDANSLA
ratTLR9        IEPKTFLAMRMLEELNLSYNGITT-----VPR----LPSSLTNLSLSHTNILVLDASSLA
MdTLR9         IEQGTFLVLHHLKELDLSGNSITF-----IPE----LPPSLTSLVISYTMILRLDSDTFS
fTLR9          IDHGVFRNLSLLQVLNLSGNSLTS-----LPK----LPANLRVLNLQRNHLFNIV--EPL
tetTLR9        INHFAFSRSLQLQVLNLSGNSLTS-----LPW----LPEKLKVLNLQRNRLFNIV--EPL
XtTLR9         IEPHALVSLKSLTNLDLSGNSLTS-----IPP----LPENIKFLNLNLNQIHMISGWEFS
mTLR3          LEPELCQILPLLKVLNLQHNELSQ-----ISDQTFVFCTNLTELDLMSNSIHKIKSNPFK
hTLR3          LEPELCQKLPMLKVLNLQHNELSQ-----LSDKTFAFCTNLTELHLMSNSIQKIKNNPFV
MdTLR3         LEPELCQSLPLLKVLNLQHNELSQ-----LSDKTFAFCLSLTELHLKSNPIQKISDNPLK
chTLR3         LKPGLCKNLPLLQILKLEHNQLHE-----LPDGVFASCSNLTELNLGYN-IIEVKNDPFK
XtTLR3         FEPALCKQLLMLKTLNLEHNEFTK-----ISENDFTFCVHLSELHLASNGISNIDGNPFE
fTLR3          LDGRLCETLPRLQTLDVAHNQVLA-----LREEDLSRCSGLTALILRSN-RLKLQGEPFS
tetTLR3        LDGRLCETLPRLRTLNVAHNQLLT-----LREEDLNPCSGLTELNLSSN-RLRLQGEPFS
zebTLR3        IEKDLCLSLPHLQFLNAQHNQVYL-----ISEKDLKNCFHLTQLDLSDN-KLKLQGEPFS
cfishTLR3      ------------------------------------------------------------
hTLR5          IDKEAFRNLPNLRILDLGSS-----------------------KIYFLHPDAFQ
mTLR5          IGPGAFRNLPNLRILDLGS------------------------QIEVLNRDAFQ
MdTLR5         IEREAFRNLPNLLVLDIGNT-----------------------KIQFLHTDAFQ
XlTLR5         VKKDSFRNTPNLVKLDLATN-----------------------QLLILDPEGLA
XtTLR5         VKKDSFRNTPSLVKLDLAYN-----------------------QLLILDSDGLA
fTLR5          IRSNAFLRQRKLQVLVLGYN-----------------------RGLQLEPRAFA
tetTLR5        IRSNAFLRQRKLSVLVLGFN-----------------------PGLRLEPRTFA
troutTLR5      IRTNTFQRLENLAVLYLGYN-----------------------TGLQIEPDAFV
mTLR13         IHKDAFTPLIKLKYLSLSRNNISD-----FSGILEAVQHLPCLERLDLTNNSIMYLDHSP
ratTLR13       IHKDAFTPLVKLKYLSLSRNRISN-----FSGILEAVQHLPCLEHLDLINNSIMYLDHSP
MdTLR13        IQENAFVPLINLQYLNLSRNAITT-----FSNVLAAVQHLPCLEVLDLTYNTIASLDCNP
XtTLR13        IQMGTLGPLGALQELDLSFNNVSD-----FRSVANAVSQLPDFLRLSLSSNFITDLKSEQ
chTLR21        VSPSALLPLVNLRRLSLRGGRLNG-----LGAVAAAVQGLAQLELLDLCENNLTTLGPG-
XtTLR21        IHPEAFSHLTNLQNLNLSMNNLHN-----FEKVVQSIHPLQKLNTLMLCSNQISSLNHT-
fTLR21         LPHGIFSHLFNLNTLIIKQNYLTN-----FSEIAMAVSSLKNLTLLDLCFNRLTSLSHSN
fTLR23         IHPSTFKDLPSLQTVVLDANRLKE-----MADIRP-LLILPKLRNLTISSNLFTSFQSKD
tetTLR23       VHTSTFQFLPRLQKLLLLDCNQLTE-----VADLQP-LLNLPSLKYLSVSGNWFTSFQSQD
fTLR22         VEPSALKSLVSLTFLDISNNKLCE-----NIRP---LFQLPNLSVLSMAGNNMRFFESGH
tetTLR22       ------------------------------------------------MAGNKMSVFQSGD
halTLR22       VTLTSFKPMNSLKFLDFSHNKLKH-----ITKVSSILQHLPNLRELFLKKNDFTTFHSEE
troutTLR22     ISSSSFQPLSSLKTVNLTKNNLHN------MKEVQPIVQLPHLQELYIGSNRFTSFQSQE
XtTLR22        LEPNTFLHLYNLKTISLSYNCFYK-----LKTLNP-AFQIGTLREINIANCSIQTFSTED
mTLR12         LPPDAFSDLISLQRLHISG----P-----CLDKKAGIRLPPGLQWLGVTLSCIQDVGELA
mTLR11         LSPNCFESLRSLSSLSFQG----Y-----CLTYSQSIYLPTSLRHLTLRNSCLTKFQDLQ
hTLR4          IEDGAYQSLSHLSTLILTGNPIQS-----LALGAFSGLSSLQKLVAVETNLASLENFPIG
rabbitTLR4     IEDDAYQGLKNLSTLILTGNPIQS-----LSPQAFSGLSNLQKLVAVETHLTSLGDFPIG
pigTLR4        IDDDAYQGLNYLSTLILTGNPIQS-----LALGAFSGLPSLQKLVAVETNLASLEDFPIG
mTLR4          IEDKAWHGLHHLSNLILTGNPIQS-----FSPGSFSGLTSLENLVAVETKLASLESFPIG
MdTLR4         IEDDTYEGLHNLSTLILTGNPIQS-----LGIRAFYGLPKLQKLVVVETNLMSLEDFPIG
chTLR4         RRQEVFQALQLLLVLSLLAGCIPSPCLEHLGLAAFHGLTSLKKLVLVETSISSLSDLPIG
XtTLR4         IEDLAFFGLNILQTLVFTGNPRSH-----WAPLSFFGLFSXHKLIVVETSLSSLTELPLR
zebTLR4        IEKDAFYNVKNLMTLILTGNPITY-----LAPECLNSLYKLQRLVLVDVRLESLQ-LQIN
hTLR2          IEEDSFSSLGSLEHLDLSYNYLSNLS-----------------------SSWFK
rabbitTLR2     IDEDSFSSLGSLEHLDLSNNHLSHLS-----------------------AAWFR
pigTLR2        VEEDSFSSLGSLEHLDLSYNHLSNLS-----------------------SSWFK
mTLR2          IEGDAFYSLGSLEHLDLSDNHLSSLS-----------------------SSWFG
MdTLR2         IDPDSFQFLRNLKHLDLSSNSLSYLS-----------------------PSWFN
chTLR2         IDEDSFGSQGKLELLDLSNNSLAHLS-----------------------PVWFG
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XtTLR2        INDGSFQPLGNLEELDLSYNNLSHLS---------------------------SAWFR
fTLR2         IHQSAFEPLWNLEDLNLSNNQLTALN---------------------------HRWFH
halTLR2       IHPAAFDSLWSLEELDLSHNQLTSLN---------------------------PDWFQ
zebTLR2       IHRDAFKSQHNLEVLDLSLNNLNNLS---------------------------PSWFH
hTLR1         LDISVFKFNQELEYLDLSHNKLVKIS----------------------------CH
mTLR1         LDISVFKFNTELEYLDLSHNELKVIL----------------------------CH
hTLR6         LDLSVFKFNQDLEYLDLSHNQLQKIS----------------------------CH
pigTLR6       LDISVFKFNQDLEYLDLSHNQLQTIL----------------------------CH
mTLR6         LDFHVFLFNQDLEYLDVSHNRLQNIS----------------------------CC
MdTLR1L       LNISVFKFNQDLEYLDLSHNNLWDIS----------------------------CH
hTLR10        LDLKTFEFNKELRYLDLSNNRLKSVT----------------------------WY
ratTLR10      LDTKIFDLNKELSYLDLSYNRLQSIT----------------------------WS
MdTLR10       LDISIFQFNKELEYLDLSYNSLRNIS----------------------------CY
chTLR1L1      LDFSAFMFNQDLEYLDLSHNNIWTAY----------------------------CQ
XtTLR1L3      LDCSVFKFNPSLEYLDISNNRLHTIKC--------------------------H-SLQ
XtTLR1L1      LDCSVFQFNPSLEYLDISNNRLHTIQC--------------------------Q-SLQ
XtTLR1L2      LNSSIFKFNTQLQYLDFSHNVLRNISG----------------------------T
fTLR1         IHPETFLHTPLLEDLDLSHNELKDLMD-------------------------QPYLQ
tetTLR1       IHPEVFLGTPLLQDLDLSHNCLKNLTD-------------------------QPYLQ
tetTLR14      IYSDAFKNNPGLEVLDIFNNSLLEIP-------------------------AAALA
fTLR14        IDSDAFKNNPLLEILDIFNNSLGEIP-------------------------VAALS
XtTLR14       IETGSFASNVLLTNLTLFNNSLTEMP--------------------------SALFE
XtTLR14L1     IENGSFNSNTQLRSLTLFNNSLTEMP--------------------------SALLE
XtTLR14L2     IECGSFASNTLLRNLTLFNNSLTEMP--------------------------STLFE
XtTLR14L3     IDNSSFASNTQLRNLTLFNNGLTEMP--------------------------STLLE
XtTLR16       IYPNAFKGLESLESLAISFLGHSKCNNLSIPTDAFSNLYYLRDLSIEGFKLVKSMLIHLP
chTLR15       IEPGAFENLLSLVSVDLSFNDKNLLVSG------------------------LAPHL


MdTLR7        DLVNLEILYLGQNCYFRNPCNDSFSIEKDAFQSLRNLTLLSLKANNLTAVPTVLPSSLTE
hTLR7         ELANIEILYLGQNCYYRNPCYVSYSIEKDAFLNLTKLKVLSLKDNNVTAVPTVLPSTLTE
chTLR7        ELRNIELLYLGQNCYYRNPCNVSFEIEETAFLNLKNLTVLSLKSNNLTFIPPNLSSTLKE
XtTLR7        ELSNIQMLYLGQNCYHRNPCSDSFKIEKDAFKDLKNLSILSMKSNNLSFVPGGLSDSLKE
tetTLR7       EIRNVEILYLGQNCYYRNPCNFSYGIEDGAFLELYNLKLLSLKSNNLSFIPHHLPSSLKE
fTLR7         EIRNIESLYLGQNCYYRNPCNFSYGIEEGAFLELHNLKLLSLKSNNLSFIPHHLPSSLKE
hTLR8         RLINLKNLYLAWNCYFN-KVCEKTNIEDGVFETLTNLELLSLFSNSLSHVPPKLPSSLRK
pigTLR8       GLRKLESLYLGWNCYFT--CNETFIIDEGAFENLTNLKVLSLSFNTLYRVPPKLPSSLTK
mTLR8         GLRNLERLYLGWNCYF--KCNQTFKVEDGAFKNLIHLKVLSLSFNNLFYVPPKLPSSLRK
MdTLR8        GLTHLSSLYLGWNCYGNGCERNVSIEDGAFEHLTNLTVLSLSFNNLLHVPTKLPPSLKE
XtTLR8        PLINLKNLFLSNNCYFGNECGQVLDIEEGTFSGLTELTELSLFNNLTHVPSKLPASLKQ
tetTLR8       SLKNVTHLYLSKNCYRWNICGTSVSIDNDSFVNMNQLVFLELSYNNLTRVPKGLPKSLRV
fTLR8         GLKNVTHFSLSRNCYRWNPCGKHVSIEKDSFSSMSNLVFLDLSFNNLSQVPKGLPQSLQF
hTLR9         GLHALRFLFMDGNCYYKNPCRQALEVAPGALLGLGNLTHLSLKYNNLTVVPRNLPSSLEY
pigTLR9       GLHALRYLYMDGNCYYKNPCQGALEVVPGALLGLGNLTHLSLKYNNLTEVPRSLPPSLET
mTLR9         GLYSLRVLFMDGNCYYKNPCTGAVKVTPGALLGLSNLTHLSLKYNNLTKVPRQLPPSLEY
ratTLR9       GLHSLRVLFMDGNCYYKNPCNGAVNVTPDAFLGLSNLTHLSLKYNNLTEVPRQLPPSLEY
MdTLR9        GLCGLRSLYMDGNCYYKNPCEREVEVVPRALENLHHLENLSLKYDNLTSVPQGLPASLRM
fTLR9         KTPHLQELYLTKNCFYANPCQQSLEISKTVFRELSRLKTLTLAYNNLTSVPEGLPSSLEI
tetTLR9       KTPYLKELNLAKNCFHANPCLQSLNISDSVFSELSQLKTLSLAQNNLTSVPKALPSSLEH
XtTLR9        RLNNVKMIRLGYNCFYSKQCEP-FHLSDSAFINNEFLEELALSFNNITSFPQNLPSSIRI
mTLR3         NQKNLIKLDLSHNGLSSTKLGTGVQLENLQELLLAKNKILALRSEELEFLG---NSSLRK
hTLR3         KQKNLITLDLSHNGLSSTKLGTQVQLENLQELLLSNNKIQALKSEELDIFA---NSSLKK
MdTLR3        NLKNLHLLDLSHIGLSSAKLGTQVQLENLQELLLTNNKIRMLKREDFDYLG---NSSLRK
chTLR3        TLENLNILDLSHNHLKSANLGLQQQLKNLRELVLYSNQITELNKEDLKFLS---NTSLNS
XtTLR3        KLEVRYSTDMSHNKMISTALGNKQQLKNLKELYLNSNKISKLNKEAFEFLA---NTSLQK
fTLR3         GLQKLTYLDVSLNNLQSARLGSRPQLPALVNLSLAQNGITVLKRDDFSFLN--HSSSLRV
tetTLR3       GLQNLKYLDVSLNKLQSARLGSRPQLPALVTLSLAHDTISVLRRDDFSFLN--HSSFFRV
zebTLR3       LLKNLTWLDVSRNKLTSAKLGTEPQLPNLVTLVLSGNNINILQKNDFSFLS--NSSSFRV
cfishTLR3     -----------------------------------------------------------
hTLR5         GLFHLFELRLYFCGLS------DAVLKDGYFRNLKALTRLDLSKNQIRSLY----LHPSF
mTLR5         GLPHLLELRLFSCGLS------SAVLSDGYFRNLYSLARLDLSGNQIHSLR----LHSSF
MdTLR5        GLFNLVQLQLYYCHLS------DSILKDGYFRNLSSLAILDLSRNEIENLQ----LHPSF
XlTLR5        GLSQLKILFLYYNKLN------GSILENDYFKDLTSLEYVDLSSNEIAYLK----PNPLF
XtTLR5        GLSQLKILFLYYNKLN------GSILENDYFKDLMSLEYVDLSSNEITYLR----PNPLF
fTLR5         GLFRLQQLFLDYCGLT------ESVLAESYLAPLLSLQELDLYGNQISTLR----PGLFF
tetTLR5       GLFRLQQLSLDYCELN------HTVLAGSYLEPLLSLRKLDLFGNQISALR----PGRFF
troutTLR5     GLSNLRALSLYRCDLT------ESILQGDYLKPLVSLETLDLYGNQVKIIQ----PALFF
mTLR13        --RSLVSLTHLS--FEGNKLRELN-FSALSLPNLTNLSASRNGNKVIQNVYLKTLPQLKS
ratTLR13      --RSLVSLTHLS--FEGNNLTELN-FSTLSLPNLTNLSASQNGHGVIQDVYLKTLPQLQS
MdTLR13       --TTLVSLTKLI--LMKNKLVDLD-FSTLSLPNLTTLDVSQN---ALQNVHLDTLPQVKR
XtTLR13       SVTVLSSLQSLN--LRNNSISVLD-FTFYSMPSLIELNVTRNNLSAVNKSSFSNLPMLAK
chTLR21       -PPLPASLLTLQ--LCNNSLRELAGGSPDMLWHVKILDLSYNSISQAEVFTQLHLRNISL
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XtTLR21      -HRLPSTLRWLF--LCKNQLATLD-CQQDFFLNISWLDLSYNNIATSSLQTMDLRKVIYL
fTLR21       -VSLPESLNRLY--LCRNNLSTLG-CEPSFLGSIEILDLSYNSELPTKALEGVNLRRINY
fTLR23       LLLDQPSSLRVL--DVSYSIFEAFSISAATFPHLEMIDLS----QSAFTWNITDRTSLQN
tetTLR23     LQLQQPSSLTAL--DVSFSRFEAFSIWPATFPHLEVLNLS----NCVFKWEITDRSSPEN
fTLR22       LTN-TSLQLKSL--DLSRNPITVFRITADILPNLTWLNLRGTFKKRQVTWDVR--TFLGN
tetTLR22     LTN-TSLKLKLL--DLSKNPIRIFRITADIFPNLTWLNIGGTFKTQQITWDVG--TFLGR
halTLR22     LTN-SSLQLKAL--DLSQNPITDFRITANVFPNLTWLNIGGAPGKTPVILGVHNKTFFSR
troutTLR22   ISN-MSIELRLL--DLSRNPLGVFRITTDVLPYLEVLDIAYCGQLGHMEWDVLDRSFLRN
XtTLR22      IVN-VSASLRSV--DASRNPFSVISFPMSILENLTNLDIS--LTQRPILWYVKEPCFLRG
mTLR12       GMFPDLVQGSSS--RVSWT-------------LQKLDLSSNWKLKMASPGSLQGLQVEI
mTLR11       RLFPDLLLSTSS--TPNIKPGAPF---------LETLDLSYNLQLKQAGVRDLYGLTLHS
hTLR4        HLKTLKELNVAHNLIQS-------FKLPEYFSNLTNLEHLDLSSNKIQSIYCTDLRVLHQ
rabbitTLR4   HLKTLKELNVAHNLIHS-------FSIPDYFSNLSSLEHLDLSNNKIQSIYHKDLRVLHQ
pigTLR4      HLKTLNELNVAHNHIHS-------FKLPEYFSNLPNLEHLDLSKNKIENIYHEHLQVLHQ
mTLR4        QLITLKLNVAHNFIHS-------CKLPAYFSNLTNLVHVDLSYNYIQTITVNDLQFLRE
MdTLR4       HIITLQELHLGHNSISS-------LQLPSYFASFSSMKHLDLHLNQIKNISDGDLEPVKL
chTLR4       HLNTLQELNLGHNNIAS-------LKLPKYFANLTSLRHLSFSSNNITYISKGDLDALRE
XtTLR4       NITSLRELYAGHNKLKS------------LLFTSLLVNLDLHGNQITEIKDNDLDLIRG
zebTLR4      NLTKLQDLKVGTNCIQS-------MTLPSFMSTFKDFSLLDLHANNISIIRMDHTAVLRE
hTLR2        PLSSLTFLNLLGNPYKT-------LGETSLFSHLTKLQILRVG-------NMDTFTKIQR
rabbitTLR2   PLSSLKFLNLLENPYRT-------LGETSLFSHLPHLRILKVG-------SLYAFANIRR
pigTLR2      SLSTLKFLNLSPYT-------LGEAPLFSHLPNLRILKIG-------NNDTFPEIQA
mTLR2        PLSSLKYLNLMGNPYQT-------LGVTSLFPNLTNLQTLRIG-------NVETFSEIRR
MdTLR2       SLSSLRVLYLHKNPYQR-------LGQSPLFSHLPSLRVLKVG-------SYDRFSELQK
chTLR2       PLFSLQHLRIQGNSYSD-------LGESSPFSSLRNLSSLHLG--------NPQFSIIRQ
XtTLR2       NLYNLKHLNLLGNQYLT-------LGNNSLFASLSSLRSLQFG--------NQDFSAIQK
fTLR2        KLEALRVLNLLHNPYSC-------LGSPPAFQRLLNLRRLRFG--------GPALEELKR
halTLR2      ELGALLRLNLLHNPYRC-------VGSSPVFHGLVRLRRLAFG--------GPALEEIKM
zebTLR2      KLKSLQQLNLVGNPYST-------VGPAPIFSSLVNLRTLHLG--------SPSLRELHK
hTLR1        PTVNLKHLDLSFNAFDA-------LPICKEFGNMSQLKFLGLST---THLEKSSVLPIAH
mTLR1        PTVSLKHLDLSFNAFDA-------LPICKEFGNMSQLQFLGLSG---SRVQSSSVQLIAH
hTLR6        PIVSFRHLDLSFNDFKA-------LPICKEFGNLSQLNFLGLSA---MKLQKLDLLPIAH
pigTLR6      PITSLKHLDLSFNDFEA-------LPICKEFGNLTQLNFLGLSA---TKLQQLDLLPIAH
mTLR6        PMASLRHLDLSFNDFDV-------LPVCKEFGNLTKLTFLGLSA---AKFRQLDLLPVAH
MdTLR1L      LLMNLIHLDLSFNEFEF-------LPICEEFSNLSQLDFLGLSA---KRIQKSDLLPVSH
hTLR10       LLAGLRYLDLSFNDFDT-------MPICEEAGNMSHLEILGLSG---AKIQKSDFQKIAH
ratTLR10     SLVDLRHLDLSFNDFDT-------LPACEEIGNMRHLETLGLSG---AKIQRSDLQKIAN
MdTLR10      PLLGLKHLDLSFNDFNN-------IPICQEFGSMSQLEFLGLSG---AQIQKSHLQKVAH
chTLR1L1     LLARLRHLDLSFNKFTV-------LPICQEFGIMFHLEYLGLSA---MMIRRSDFRYVAH
XtTLR1L3     YIKNIKRMDLSYNNFKT-------MDFCSEFTALSQLKHLGLSS---KKIQKDSFINIAS
XtTLR1L1     YIKHIKHLDLSYNNFKQ------MHFCKEFTALSQLKHLGLSA---EQIQTNSFLNIAP
XtTLR1L2     FPSHIQHLDISFNNFQT-------LSVCSGFGNMVLLEYLGLGA---DQILKSDFEGIVH
fTLR1        HTENLVALNLAHNKFLT-------MTLAREFGSLVKLQRLTLGG---STISVGDFRNIAD
tetTLR1      RAGNLLFLNLAYNKFVT-------MTLAREFGSLAKLERLTLGG---NVIRVGDFGNIAD
tetTLR14     PLLNLKKLYMSNNLYKN-------ATLADTFSTFVGLQTLSLGGPLVEGLKKEDFQPLKN
fTLR14       PLLNLKKLYMSNNLYKR-------AALAETFSTFVRLQTLSMGGPLVEGLKKGDFQPLRK
XtTLR14      PLRFLQFLDISNNFYNC-------ATLGAEFSMLENLRNLSIGGPLVSKVLKGDFAPIKN
XtTLR14L1    PLHLLEFLDMSNNFYNK-------STLGDVFQTLVNLQTLSIGGPLVSKVQKDDFVPIRN
XtTLR14L2    PLLLLEFLDVSNNLYNY-------STLGKVFENLVNLQNLAIGGPLVSKVLKDDFAPIKN
XtTLR14L3    PLLLLEVLLDSDNLYNY-------STLGKVFKTLANLRSLSIGGPFVSKVLRGDFVPIKN
XtTLR16      FSTSLYSLSLPTNCITD------LFHVFHIFQNLIFIHNLDVGSNKIERVSLQHDLNISL
chTLR15      KLIPTSGASGPSQIYMYFQKSAEAALEPSAPAELLPHLEDPPNPGNVNPRFRQRRTEENK


MdTLR7       LYLH-NNNIQRFKKDDFHNLYQLQILDLSGNCPRCFNVPFPCIPCPNNSPLVIHGGAFDS
hTLR7        LYLY-NNMIAKIQEDDFNNLNQLQILDLSGNCPRCYNAPFPCAPCKNNSPLQIPVNAFDA
chTLR7       LYIY-NNRIQEVQEHDLSNLYNLEILDLSGNCPRCYNAPYPCTPCPNIS-IKIHSKAFYS
XtTLR7       LYLY-NNAIQYIEEHDLENLINLEILDLSGNCPRCYNSPFPCTPCPNNAPIQIHPKAFSS
tetTLR7      LYLY-NNNFQSVSAEDFKNLTNLEILDISGNCPRCYNVPFPCNPCPNNAPLKISKEAFKT
fTLR7        LYLY-NNNFQQVTDEDFKNLTNLEILDISGNCPRCYNVPFPCNPCPNNSPLQISKSAFKT
hTLR8        LFLS-NTQIKYISEEDFKGLINLTLLDLSGNCPRCFNAPFPCVPCDGGASINIDRFAFQN
pigTLR8      LYLS-NTKIRNINQEDFKGLENLRVLDLSGNCPRCFNAPFPCNPCPGDASIQIHPLAFRY
mTLR8        LFLS-NAKIMNITQEDFKGLENLTLLDLSGNCPRCYNAPFPCTPCKENSSIHIHPLAFQS
MdTLR8       LYLS-NNKIKNISQDDLKGLENLRVLDLSGNCPRCFNSPFPCVPCENGASIQIHPDAFQN
XtTLR8       LYLS-NNNIQIINRNDFHNLVNLEVLYLSGNCPRCFNANYPCKNLCPNTSLKDH-FAFQN
tetTLR8      LQLD-NNKIQIIHSDDFQSLRKLKALKLEGNCPRCKNAPFPCEPCQN-MSLRIHPKAFYD
fTLR8        LKLD-NNKIQNIYSDDFYGLQNLKELKLEGNCPRCENAPFPCDTCQN-ISVRIHPNAFYN
hTLR9        LLLS-YNRIVKLAPEDLANLTALRVLDVGGNCRRCDHAPNPCMECPRHF-PQLHPD-TFS
pigTLR9      LLLS-YNHIVTLTPEDLANLTALRVLDVGGNCRRCDHARNPCRECPKDH-PKLHSD-TFS
mTLR9        LLVS-YNLIVKLGPEDLANLTSLRVLDVGGNCRRCDHAPNPCIECGQKS-LHLHPE-TFH
ratTLR9      LLLS-YNLIVKLGPEDLANLTSLRVLDVGGNCRRCDHAPDLCTECRQKS-LDLHPQ-TFH
MdTLR9       LLIS-SNRIVSLSPQDFVGLPALQVLDVSRNCRRCDHAHNPCQECPPGF-PKVHPD-TFS
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fTLR9        LDLS-ENTITEVLEGAFADLTHLRELNLEWNCQRCDRAARPCFPCPRHLPLQLHSKSFYA
tetTLR9      LDLS-ENTITEVLEGTFADFIHLNHLNLEWNCQRCDHAAQPCFPCPKNQPLQLYSKSFYT
XtTLR9       LDLS-ENKISKIDREDLCNLNNLYSLDLQWNCQRCDHALQACYPCKNNSALLLVPG-VFD
mTLR3        LDLS-SNPLKEFSPGCFQTIGKLFALLLNNAQLNPHLTEKLCWELSNTS-----------
hTLR3        LELS-SNQIKEFSPGCFHAIGRLFGLFLNNVQLGPSLTEKLCLELANTS-----------
MdTLR3       LDLS-SNHLIEFSPDCFRSIGKLYDLSLNNVQLGPELTEKLCLELSSTS-----------
chTLR3       LDLS-SNPLKEFHTGCLHAIGNLFGLILNNVELGENRTKKLCTELSDTA-----------
XtTLR3       LDLS-SNPLTEINPGCFQAIGSFAALVIQNTQLDPQRTEQVCSELAHTG-----------
fTLR3        LNLS-SVPLKTLEPGCLKPISGLSTLILDGSNMGALVIAGICSQLSGTA-----------
tetTLR3      LNLS-SVLLKELEPGCLKPISGLSTVILDGTNTGTQVIAKLCSELSGTA-----------
zebTLR3      LILS-SLILKKVENGCFKAIDTLYDLVLDSSKLTSQFTTSLFEELADTA-----------
cfishTLR3    ---------------------QDLVLDGCKLNPSFMSRLCEELSDTS-----------
hTLR5        GKLN-SLKSIDFSSNQIFLVCEHELEPLQGKTLSFFSLAANSLYSRVS-----------
mTLR5        RELN-SLSDVNFAFNQIFTICEDELEPLQGKTLSFFGLKLTKLFSRVS-----------
MdTLR5       GNLE-SLKSIDLSLNHISLICKRDLEVLQGKRFSLFNLASNNLYSKVS-----------
XlTLR5       YHLY-SLSILILRYNHISSICAGDLHSFEMKNFTFMDLSDNYFYNWET-----------
XtTLR5       YHLY-SLDIINLRHNQISSICAGDLHSFERKYFTIMELSHNRFNKWEM-----------
fTLR5        SQLT-YFTELNLDLNPIERLCESDLVGFQGKSFHRLSLNSAHLYKMNDAT----------
tetTLR5      SKLQ-HFTELNLKLNPIERLCESDLAGFQGKHFGYLSLSSTRIGRMRSAT----------
troutTLR5    VNMT-DFQELNVSLNRMESICEEDLLGFQGKHFRLLKLNSLYLYSMTQYG----------
mTLR13       LNLSGTVIKLENLSAKHLQNLRAMDLSNWE---LRHGHLDMKTVCHLLGN----------
ratTLR13     LNLSGTVVKLEMLSAKHLQNVRVMDLSNRE---LKHGHLNMKIVCYLLRN----------
MdTLR13      LNLSQTCLEVEKLDAKHLQNLIELDLSGITP-LPNTKHVNLSAVCHLLQN----------
XtTLR13      VTFDENSLNISQLLGLVLPNLTEFHWSSMR----PALQHELVSACQVFQT----------
chTLR21      LHLIGNPLDVFHLLDISDIQPRSLDFSGLV----LGAQG-LDKVCLRLQGP---------
XtTLR21      NVAFNGNFDILIFIKNPTVPINRIDYSGLN----LNNDSKLKTMCRYLKG----------
fTLR21       LRLRSTKVNIVEFIQNSDIHAGHVDFTSTH----LNTEAKLVELCKLLKRK---------
fTLR23       ITRLFFSHTKVSSRQIQEILQNV--ASLKHLRMNYIDEWIREGLLATVCR----------
tetTLR23     LTQLHFSQTLVPFQQVQEILQSA--ASLEHLRMTYIDAWIHHGLLATVCS----------
fTLR22       VSLLDISELRLSLRYMTSLLASVN-SSLTVLRMDKMSCS-LAELINISCS----------
tetTLR22     VNTLDISELRLDLGHVTPLLASLD-ASLTVLRMNQMSCS-LAALINISCS----------
halTLR22     VSTLDITGLRMTLVDIRTLLGTVN-SSLSSLRMNAMKNN-ITALTHISCT----------
troutTLR22   VKSLNLSGIEMSLERMAMVLQTVN-SSLVHLRLYDISEERVKALIDFACN----------
XtTLR22      LKKLNIKENNIKPPAIIGIIKNLSCSSLEELNLSYLNLTDSDQLIQELCLR---------
mTLR12       LDLTRTPLDAVWLKGLGLQKLDVL-----------YAQ-TATAELAAEAVA----------
mTLR11       LILDGTPLKALDLTDSGLLHLHFL-----------SLVGTGIEKVPASLTG----------
hTLR4        MPLLNLSLDLSLNPMNFIQPGAFKEIRLHKLTLRNNFDSLNVMKTCIQG-----------
rabbitTLR4   MPLGTLSLDLALNPIDFIPPGAFEAIRLHELILKSNFKSTNIMKICIQG-----------
pigTLR4      VPLHNLSLDLSLNPLNFIEPGAFNKIRLNGLTLRSNFNSSDVMKTCIQG-----------
mTLR4        NPQVNLSLDISLNPIDFIQDQAFQGIKLHELTLRGNFNSSNIMKTCLQN-----------
MdTLR4       NP--NLTLDLSENPIQYIHPGAFKGIHLSGLKLRSSFHNSTIMEACIKG-----------
chTLR4       TNRLNLTLVLSLNNIKYIQSGSFAKIHLGELILRSSFENLNAMHSSLQG-----------
XtTLR4       VMKTSLSLILSCNPIHYFSPKAFMDINLHKLQIQGCFSNAESLRSNLKV-----------
zebTLR4      IG-RNMTLILSRNPLIHIEPGAFKDVILRELHLLAAFISFNAQKECHKA-----------
hTLR2        KDFAGLTFL-EELEIDASDLQSYEPKSLKSIQNVSHLILHMKQHILLLEIFVDV------
rabbitTLR2   MDFAGVRSL-EELEIDGSNLQSYEPRGLGSIPNVSRLVLHLRQPTLLLKLFPDL------
pigTLR2      KDFQGLTFL-QELEIGASHLQRYAPKSLRSIQNISHLILHMRRPALLPKIFVDL------
mTLR2        IDFAGLTSL-NELEIKALSLRNYQSQSLKSIRDIHHLTLHLSESAFLLEIFADI------
MdTLR2       QDFEGLREL-EDLEIEAAYFQKYEPGSLKSIHKINHLALSIRKPNLLPDILVDL------
chTLR2       GNFEGIVFL-NTLRIDGDNLSQYEPGSLKSIRKINHMIISIRRIDVFSAVIRDL------
XtTLR2       LHFESLERL-NILEIKAAQLGLYEEGSLAAIKQINHAVLTVN-IQNLRALLNDF------
fTLR2        GDLAGITHL-EELTVHANNLRRYESGALATIWPLGRVILSLHGPFLTNDDVAST------
halTLR2      AALSGVTEL-ETLTVHANNLSRYESGALSYVWPLGCVTLSLHGPFLTNMALASA------
zebTLR2      NGLDVLTHL-DEMTFFGSNLRSYENGSLKAARPIGSVSLSLQNLFESDPELVSK------
hTLR1        LNISKVL-L----VLGETYGEKEDPEGLQDFNTESLHIVFPTNKEF--HFILDVSVKT--
mTLR1        LNISKVL-L----VLGDAYGEKEDPESLRHVSTETLHIVFPSKREF--RFLLDVSVST--
hTLR6        LHLSYIL-L----DLRNYYIKENETESLQILNAKTLHLVFHPTSLF--AIQVNISVNT--
pigTLR6      LHLSCIL-L----DLERYYMKENEKESLQILNTEKLHLVFHPNSFF--SVQVNISVKS--
mTLR6        LHLSCIL-L----DLVSHHIKGGETESLQIPNTTVLHLVFHPNSLF--SVQVNMSVNA--
MdTLR1L      LNLSNIL-L----DLERFGGAKDKLETLPVLNTKKLQIIFPPNRAF--FMQLNISVNN--
hTLR10       LHLNTVF-------LGFRTLPHYEEGSLPILNTTKLHIVLPMDTNF--WVLLRDGIKT--
ratTLR10     LQFSTVF-------IGLNTLSHYEEGSLPVLNTTVLHIVLPMAANF--WVLLCDGMKT--
MdTLR10      LHLNTVF-------LGLKHLSSYEEGSLSLLNTERLRIVFPEIADY--RFILRDGIHT--
chTLR1L1     LQLDTVF-------LTLEDFSLYEPLSLTALNTRSLHIVFATNQNFN-FSLLYDGMST--
XtTLR1L3     MDLDFVF-------LGIENEIEYENGSLQFLNTNKLHINLQPNLSLASSYLLSDALDT--
XtTLR1L1     MQLEYVF-------LGMEDLTEYENGSLQFLNTNKLLINLPTNLNLASSYLLSDALNT--
XtTLR1L2     LHLKEVF-------IELNSLNDYENGSLLLLNTKKLTLDFGVLSNEDRYNVLFDAVNT--
fTLR1        VELRVMS-------LFLEGVLVYEPGSLQDVYARRLQVKFNNKFPHD---LMEDALSF--
tetTLR1      VELRLLS-------LHLEGKLLYEPGSLKDAYARRLQVELNKEFPLH---LINDALSF--
tetTLR14     IRLQEFA------IKCSSNLMYYEPGSLKVVQTQKLGFDMAIDQRPKALIDMLGDIANKT
fTLR14       LRLQEFA------IKCSSNLMYYEAGSLEVVQTQKLGFDMAIDQRPSALVDMLRDIANKT
XtTLR14      ISLQRFS------LKTMSSLWLYEKGAFSDLNTQSLWLDIALDTNPQALPRMLKDLAGKA
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XtTLR14L1    IGLQKFA------LKTMSSLTLYEEGAFSVLNTHVLWFDIALDTNPQALLLILKDLKGKS
XtTLR14L2    RSLKKFS------LKTMSKLGFYEPGALEVLNTRVLWLDISLDTNAQALPLILKDLAGKT
XtTLR14L3    ISLQKFE------LKTRSSLRFYQTGAFSVLNTDVLVLVMTLDTNPKVLPMILKDLAGKS
XtTLR16      PNITELVLEKNPLILIQQNALARFGIHLLNLGFTKLNLEDILNAGVENLKSLS-------
chTLR15      TSPPAATLRPDLCGAPINGLLDLSRTKLSNEELTAKLDADLCQAQLGTVLEFN-------


MdTLR7       -LSELKILRLHSNSLQHIPKSWFKNT---KKLEELDLSQNFLAKEIGEA-----KFLNSL
hTLR7        -LTELKVLRLHSNSLQHVPPRWFKNI---NKLQELDLSQNFLAKEIGDA-----KFLHFL
chTLR7       -LKKLRILRLHSNSLQSIPSSWFKNI---KNLKNLDLSQNFLIKEIGDA-----EFLKLI
XtTLR7       -LKNLQVLRLHSNSLRSIPEQWFKNN---RNLQVLDLSENFLASEISTA-----NFLKYI
tetTLR7      -LTKLKTLRMHSNSLTHVAPEWFASI---KELRVLDLSSNNLARDIGVT-----VFPNFL
fTLR7        -LTKLKTLRMHSNSLRYVVPEWFAST---KELRVLDLSSNHLARDIGVT-----LFPHHL
hTLR8        -LTQLRYLNLSSTSLRKINAAWFKNM---PHLKVLDLEFNYLVGEIASG-----AFLTML
pigTLR8      -LTALRYLNLSSTSLRRIPATWFENL---HHLKVLHLEFNYLMDEIASG-----NFLAKL
mTLR8        -LTQLLYLNLSSTSLRTIPSTWFENL---SNLKELHLEFNYLVQEIASG-----AFLTKL
MdTLR8       -LANLTYLNLSSTSLRSIPVSWFSNM---PKLKVLHLEFNYLVQEIATG-----GFLTKL
XtTLR8       -LKNLTELHLSSTSLKTIPPTWFQNT---TQLKKLYLERNYLVNEIASA-----DFLLNL
tetTLR8      -LKNLETLNLGGNSLQHLNPTWFEKL---SRLKALYLAFNFLLKPITEEG----AFLNYI
fTLR8        -LTNLETLNLGGNSLKELNPSWFERL---YKLKQLFLAFNFLLKPITEQG----AFLKYI
hTLR9        HLSRLEGLVLKDSSLSWLNASWFRGL---GNLRVLDLSENFLYKCITKT-----KAFQGL
pigTLR9      HLSRLEGLVLKDSSLYNLDARWFRGL---DRLQVLDLSENFLYDCITKT-----TAFQGL
mTLR9        HLSHLEGLVLKDSSLHTLNSSWFQGL---VNLSVLDLSENFLYESINHT-----NAFQNL
ratTLR9      HLSHLEGLVLKDSSLHSLNSKWFQGL---VNLSVLDLSENFLYESINKT-----SAFQNL
MdTLR9       HLGALEGLVLKDNSLSRLDPRWFRNL---VNLTVLDLSENFLSEDITVT-----RAFQNL
fTLR9        NKSTLTYLNLRGNSLRTFPKGLFQPL---KNLKMLDLSDNFLSYAIQNG-----TFFAEL
tetTLR9      NKSSLIFLSLRGNSLRTFPKGLFQPL---KKLAYLDISDNFLSDAIQKG-----SFFAEL
XtTLR9       CLHKLSYLNLRGNSLHTLHSSLFSSL---TNLSHLVLSDNFLN--LETE-----TFFSAL
mTLR3        ----IQNLSLANNQLLATSESTFSGLK-WTNLTQLDLSYNNLHDVGNGS-------FSYL
hTLR3        ----IRNLSLNSNSQLSTTSNTTFLGLK-WTNLTMLDLSYNNLNVVGNDS-------FAWL
MdTLR3       ----VQSLNLSAIQLTKISNMTFRGLN-QTNLTVLNLSHNGLTSIANDS-------FAWL
chTLR3       ----IQNLSLSHVKLSHINRLTLQGLQ-GTNLTVLNLSKNSLSVIEDDS-------FQWL
XtTLR3       ----VLNLTLNNNIRLSKIRNTTFKGLA-DTNLTVLDLSGNSLSQIDNDS------FVSL
fTLR3        ----ISSLSLRNMKLASLPNTTFAGLQ-QTNLSCLDLSRNGLGKIENGS-------FQWL
tetTLR3      ----ISTLSLRNMKLVTLTNNTFVGLQ-KTNLSCLDLSRNGLGRIEKGS-------FLFL
zebTLR3      ----LRNLSLKSTEQVTLSNTTFQGLE-KTKITVLDLSENRISKIVDGA-------FQWL
cfishTLR3    ----LRNLSIQFTQQVMLNNSTFKGLG-KTNLTILDLSNNNMARITDGA-------FQWF
hTLR5        -----VDWGKCMNPFRNMVLEILDVS---GNGWTVDITGNFSN-AISKS-----QAFSLI
mTLR5        -----VGWETCRNPFRGVRLETLDLS---ENGWTVDITRNFSN-IIQGS-----QISSLI
MdTLR5       -----VNWKECMNPFKNMSFEILDVS---SNGWTVDIVRDFCH-AIQGT-----RISSLL
XlTLR5       -----LGSDRCGNPFRNIRFDTLLLS---GNRFGVSQMQKFSS-ALNGT-----KIIQLK
XtTLR5       -----LGSDRCGNPFRNIEFDTLMLS---GTGFDVDKMQKFCG-ALNGT-----KMMQLK
fTLR5        -----FDWEQCGNPFRWIAFRTLDLS---STGFNLNTLRRFLK-AIEGT-----LINHLI
tetTLR5      -----FDWERCGNPFRHISFGTLDMS---GHGFDLKTLSRFFK-AIQGT-----LIEHLI
troutTLR5    -----FDWKRCGNPFRNMSMETLDLS---SNGFDVDKAKLFFN-AIQGT-----KIHHLI
mTLR13       -LPKLETLVFQKNVTNAEGIKQLAKCT---RLLFLDLGQNSDLIYLND---SEFN---AL
ratTLR13     -LPMLEILFFHKNATNAEGIKQLAKCT---RLLFLDLGQNSDLVHLND---SEFN---AL
MdTLR13      -LPRIETLFFQKNGIDSENIKHLANCT---MLVSLDLSHNKDLVHLCN---SEFS---DM
XtTLR13      -FPKLQLLDIKHSKIAVTNLSIIGRCT---NLTSLILS-TSPLPRLQE---KDLQ---DF
chTLR21      --QALRRLQLQRNGLKVLHCNALQLCP---VLRELDLSWNRLQHVGCA---GRLLGKKQR
XtTLR21      --FNINTLYLSGNKIKTLNRGTLTDCP---LNKTLDLSRNRLKGLGCL---EFMS---K
fTLR21       -LSRITKLTLVGNKIETLTANTLAHCPN--ITKTLDLSKVGQKKSDCL---QFLK---EQ
fTLR23       -IPSLRVLELYLNKVPNLS-AQVEFCS---ELVQLDLSCSDVSEVPPGSFRL-------M
tetTLR23     -ISSLRTLELYFNKVENLS-ARLESCS---QLLHLDLSCSDMAGVPPGSLRL-------M
fTLR22       -IPTMSALQLQNNKLGSINSSVFHLCT---NVKDLDLQRNQINSTDEGAFRS-------M
tetTLR22     -IPTMLKLQLGRNRLRSVSSSMFHLCS---NVTELNLMQNQIDSVDKRTFRS-------M
halTLR22     -IPTLSTLQLRHNKLTYVSSDLFKLCF---NIREIDLTDNKIKKIRDDAFSS-------L
troutTLR22   -IPTLSLLRLHHNNISALSEEFLQSCK---QVTEVDLENNNIIQLSEVSFRS-------M
XtTLR22      -HPKVQTLKLTGNQYTEFREDTFQNCT---SVKVLDLSHNRLHSAPGSTFHH-------L
mTLR12       -HFELQGLIVKESKIGSIS-QEALASCH--SLKTLGLSSTGLTKLPPGFLTA-------M
mTLR11       -YSELRALDLGKNQIQNILENGEIPGYK--ALEFLSLHDNHLQTLPTRFLHT-------L
hTLR4        ---------LAGLEVHRLVLGEFRNEG------NLEKFDKSALEGL--------------
rabbitTLR4   ---------LSGLEVHRLVLGEFKNER------NMKNFDKSALEGL--------------
pigTLR4      ---------LAGSKVNQLVLGEFKNER------NLESFDKSVLEEL--------------
mTLR4        ---------LAGLHVHRLILGEFKDER------NLEIFEPSIMEGL--------------
MdTLR4       ---------MTGLKVGKLVLGNYKNDI------QMTSFESSILDGL--------------
chTLR4       ---------LAGLQVNRLIVGEFTNIL------KITAFQNGLLSGL--------------
XtTLR4       ---------LSGSKIEKLEIGDYRSSA------VKISFQEGLMEGL--------------
zebTLR4      ---------LTGLTVDKLFVGRYRMDE------KIKVSVPDYLDGL--------------
hTLR2        ----------------TSSVECLELR---DTDLDTFHFSELSTGETN------------
rabbitTLR2   ----------------LSSVECLELR---ETDLEDFRFSGLSVTEPN------------
pigTLR2      ----------------LSSLEYLELR---NTDFSTFNFSDVSINEHC------------
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mTLR2        ----------------LSSVRYLELR---DTNLARFQFSPLPVDEVS------------
MdTLR2       ----------------ASSLQYLEFR---KTNLGEFNFS-MPPNTPS------------
chTLR2       ----------------LHSAIWLEVR---EIKLDIENEKLVQNSTLP------------
XtTLR2       ----------------VHSVTLLEMK---DMQFGDAADVKAMVILND------------
fTLR2        ---------------MLGDVSYPETPMILRDLNLTWIQSVHNLRVAAR-----------
halTLR2      --------------VLRDVSYPETPIVLEDLHLIGNRSTQPLRELAK-----------
zebTLR2      ---------------VLQDVSHPETLLIIKDVTMKTNTSTEPFKMVKE-----------
hTLR1        ----------------VANLELSNIKCVLEDNKCSYFLSILAKLQTN------------
mTLR1        ----------------TIGLELSNIKCVLEDQGCSYFLRALSKLGKN------------
hTLR6        ----------------LGCLQLTNIK--LNDDNCQVFIKFLSELTRG------------
pigTLR6      ----------------VGCLQLANIK--LGDDNCQVFITFLLELTQG------------
mTLR6        ----------------LGHLQLSNIK--LNDENCQRLMTFLSELTRG------------
MdTLR1L      ----------------LRSLQITNIN--LNNDKCSVFTDFLSKVIHN------------
hTLR10       ----------------SKILEMTNIDGKSQFVSYEMQRNLSLEN--------------
ratTLR10     ----------------SKVVEMSNIGGKSQFVSYETPRTLSVEN--------------
MdTLR10      ----------------SKILEMANIN-MNQFTNHDNQKNPLLEKPKG------------
chTLR1L1     ----------------SEKLKIVNLR---YTLSHKDFPSPSLELQKK------------
XtTLR1L3     ----------------SMTLEVSGAQ---CDVHCDYFTKSFFTINKN------------
XtTLR1L1     ----------------STTLEVSGAQ---CDVHCDYFTKSFSTITKN------------
XtTLR1L2     ----------------TSVLELSHLQR--WNIHID-PKKYIFNIVQN------------
fTLR1        ----------------FPEVELLELSRGYQELSKQLSQRSEIY---------------
tetTLR1      ----------------FPEVELLKLPEGCRELSRQLSQRAEIY---------------
tetTLR14     ----------------FIAIQIRNLFEFMYYTGEQDIFQGLQRVVR-------------
fTLR14       ----------------FIAIQFRNLFEFRYYTRVQDIFQGLKHVA-------------
XtTLR14      ----------------FSSLRFRNLFEFTYYTDAMDVFFGLADIF-------------
XtTLR14L1    ----------------FDVLRFRNLFEITYYTDTVDIFSWLPSIS-------------
XtTLR14L2    ----------------IDSLRFRRLFESSYYTDTMDLFCGLVDIN-------------
XtTLR14L3    ----------------LDILSFGNLFEHNYYAGPTNPFSSLPDIN-------------
XtTLR16      --------LTSACRRAINKTHTLCSIAQRFQLKSLSAPVNRFSGIYTKDFLG-------C
chTLR15      ------------ISHSDLEMDLLSLFILFLPMKDIQSVDASYNRITINN----------

MdTLR7       VNLKDLDLSFNYEPQVYRAYLNLSNTFASLKNLKILRLKGYVFKELQSTHLFYLK-NLSQ
hTLR7        PSLIQLDLSFNFELQVYRASMNLSQAFSSLKSLKILRIRGYVFKELKSFNLSPLH-NLQN
chTLR7       PSLVELDLSFNFELQMYSPFLNLSKTFSCLSNLETLRIKGYVFKELREENLDPLL-NLRN
XtTLR7       PSLKSLDLSFNFELQVYPSDLKLSSIFSSLASLETLRIRGYVFQNLKKNNLMPLV-HLPN
tetTLR7      CKLQELDLSFNYELQKYPQTLRLSHTFESLRSLKILRLQGFVFQQLRPKSITPLK-HLTN
fTLR7        GKLQELDLSFNYELQRYPRTLRLSCSFKSLNSLRILRLQGFVFQQLKPESITPLK-SLTN
hTLR8        PRLEILDLSFNYIKGSYPQHINISRNFSKLLSLRALHLRGYVFQELREDDFQPLM-QLPN
pigTLR8      PSLEILDLSYNYEQKKYPQYINISHYFANLTSLQILHLRAYVFQELRKEDFQPLR-NLLH
mTLR8        PSLQILDLSFNFQYKEYLQFINISSNFSKLRSLKKLHLRGYVFRELKKKHFEHLQ-SLPN
MdTLR8       RNLEILDLSYNYLKNQYPFYITLSSNFSKLDSLKVLHIRGYVFQELRKKDFQSLM-KLPK
XtTLR8       PFLEVLDLSFNYDLRSYTNNINISDHFSKLVSLKELHIQGYVFKHIAANNLAPLL-NLSK
tetTLR8      SSVRKIDLSFNYNLKSYPETINLSSNFSNLRALKTLHLEGLVFRNIGPDTLRPLY-QLKN
fTLR8        PNIKKMDLSFNYNLRSYPKTINLSPEFSNLAALQTLHLEGLVFQNIGPDTLRPLY-QLKN
hTLR9        TQLRKLNLSFNYQKRVSFAHLSLAPSFGSLVALKELDMHGIFFRSLDETTLRPLA-RLPM
pigTLR9      ARLRKLNLSFNYHKKVSFAHLHLAPSFGHLRSLKELDMHGIFFRSLSETTLQPLV-QLPM
mTLR9        TRLRKLNLSFNYRKKVSFARLHLASSFKNLVSLQELNMNGIFFRSLNKYTLRWLA-DLPK
ratTLR9      TRLRKLDLSFNYCKKVSFARLHLASSFKSLVSLQELNMNGIFFRLLNKNTLRWLA-GLPK
MdTLR9       TKLKKLNLSFNYHKKVSFAYLHLAPSFQNLTALQVLDHDMSGIFFRSLTQATLQPLL-GLPH
fTLR9        TSLAWISLIYNYEPLKMFPELFLSPHIGDISGLQYLLLSGNFFHSLSGQSFEVLS-KLRN
tetTLR9      TSLSWISLIYNYEPLKTLPRLSLSPHIGTISGLQHLLLSGNFFHSFSPQSFEVLY-KLQK
XtTLR9       TNVKELNLDFNFKPYSMYERLVLNSNVARMKSLERITIVGYFFNVLDEEGIMPLL-SLPN
mTLR3        PSLRYLSLEYNNIQRLSPRSFYGLSNLRYLSLKRAFTKQSVSLASHPNIDDFSFQ-WLKY
hTLR3        PQLEYFFLEYNNIQHLFSHSLHGLFNVRYLNLKRSFTKQSISLASLPKIDDFSFQ-WLKC
MdTLR3       SHLEWLVLENNNIDHLFSRSFYGLSNVKYLNLKRSFFKPKNSKISFPKIDDFSFQ-WLKC
chTLR3       SKLEYLNLEDNNIINVSSHLFYGLSSITHLNLINSLTG---------KIEDFSFQ-WLHH
XtTLR3       GALEILNLENNDISHVNPKTFNGLSKVRVLNLRKSLSSN-------LKLDDLSFQ-SLHN
fTLR3        PRLETLILMENNIKHLTRDTFQGLQSLKTLQLTKALVKG--HTSATPIIDNFSFQ-PLTT
tetTLR3      PRLQTLILEENNIKHLTSDTFQGLHSLKSLQLTKALVKG--HTSANPVIDDFSFQ-PLKA
zebTLR3      PQLEFLSLEHNTIRHLTNDSFSGLGNLRQLNLRKALIKS--HAS-LPVIDDFSFQ-HLVQ
cfishTLR3    PMLEYLSLEHNNLKHLTKGTFLGLKSLRKLNLQSALAKG--HASPLPVIDDFSFQ-PLVK
hTLR5        LAHHIMGAGFGFHNIKDPDQNTFAG-----LARSSVRHLDLSHGFVFSLNSRVFE-TLKD
mTLR5        LKHHIMGPGFGFQNIRDPDQSTFAS-----LARSSVLQLDLSHGFIFSLNPRLFG-TLKD
MdTLR5       LNYHIMGGGFGFHNLKEPDQDTFAA-----LGMSSVIKMDISHGFIFSLNFHLFE-TLRE
XlTLR5       LCHHIMGPGFGYNNFKDPDNRTFVG-----LVNSDLEILDLSKGSIFSMQPYTYG-NLTI
XtTLR5       LDSHGMGAGFGYNHIKDPDNSTFVG-----LVNSNLQILDLSTGNIFSLKPYTFG-NLTV
fTLR5        ISS-NMGKGFSHNNLPDPDEDTFEG-----LVSSGIHTMDLSRNWIYVLKSAVFR-PLRN
tetTLR5      LHG-HMGRDFSYANLPDPEEETFQG-----LGSSGIQTLDLSGNRIFALNRAVFQ-PLGN
troutTLR5    LEHSTMGKSFGFSNVKDPDRQTFEG-----LENSSVKILDLSKCFIFTLQYAVFS-PLRE
mTLR13       PSLQKLNLNKCQLS--------FINNRTWSS-LQNLTSLDLSHNKFKSFPDFAFS-PLKH
ratTLR13     PSLQRLNLNKCQLS--------FISNKTWSS-LQNLTILDLSHNKFKSFPDFAFS-PLKR
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MdTLR13      PSLERLDLNSCMLS-------LVSNMTWDS-LQNLTVLDLSRNRLKTFPDFAFA-PLRR
XtTLR13      KYLEVLYLDKCKLR-------RIANSSWRG-LNNLHTLILERNQLSDLEDKLFS-PLTS
chTLR21      EKLEVLTVEHNLLK-------KLPSCLGAQVLPRLYNISFRFNRILTVGPQAFA-YAPA
XtTLR21      TNVENLIVEHNLLK-------ELINCSKKSHFPRLRHISFRYNRIWIVKGNAFH-FAPN
fTLR21       RQITTFIAEHNHYS-------SLPTCEDEDPFRQLEELRYRYNRILSVNSHAFH-HTPN
fTLR23       KQLRLLNLEVNLLT-------KVP--EDIRNISSLQVLYLSDNLITEVGCEEFS-NTSA
tetTLR23     TQLKLLNLEVNLLT-------RVP--EDIRSLSSLQVLNLKDNRISELGCEDFS-NTSA
fTLR22       KELKVLTLSDNNRLQ-------SVP--VATRNLPNLMKLDLSKNKINALHCDDFA-NITK
tetTLR22     PQLTVLSLSNNNLS-------SVP--AATRNLPALMELDLSKNRIQAVRCGDFA-NLTS
halTLR22     QSLKTLSLSRNKLS-------SVP--YATRTLPSLGELDLSFNNITKLGCDDFA-NQTK
troutTLR22   EQLSTLRLGHNRLS-------SVP--DATRNISTLMLLDLSFNIIHKLGCSDFS-NLTG
XtTLR22      ASIRELSLANNSLT-------AIP--DNFSFITSLQKLNLSYNHVKEVNLNDS---FSN
mTLR12       PRLQRLELSGNQLQS------AVLCMNETGDVSGLTTLDLSGNRLRILPPAAFS-CLPH
mTLR11       PQLQKLNLSMNKLG-------PILELPEGLFSTNLKVLDLSYNQLCDVPHGALS-LLSQ
hTLR4        CNLTIEEFRLAYL----DYYL--DDIIDLFNCLTNVSSFSLVSVTIERVKDFS---YNFG
rabbitTLR4   CNLAIEEFRLAYI----DDLE--GNITDLFDCLENVSVMALVHMYIDNQEIFP---KDFS
pigTLR4      CNLTLEQFRIAHF----GEFP--DDVSDLFNCLANASVISLLSLNLHGLEALP---NDFR
mTLR4        CDVTIDEFRLTHT----NDFS--DDIVK-FHCLANVSAMSLAGVSIKYLEDVP---KHFK
MdTLR4       CEVDIGEFRMVQP----SQFP--SDGNGVFKCLVNVSVLFLVNTDIDQLTNLP---IFPK
chTLR4       CQVQMQEFVLMCF----REFD--NDTDTLFDCIGNVTTIRLVDLNLETLSEVP---MFSQ
XtTLR4       CRADIQELSINGMYFPAR-------DTPLDCVKYSTSLCVVNNNLELDNIIQSNEIFDR
zebTLR4      CSINFNEIYLVQK-----EWS--DSEMHLFRCMVNATKITIKKAYMNSMKHIP----FHR
hTLR2        --SLIKKFTFRNVKITDESLFQVMKLLNQISGLLELEFDDCTLNGVGNFRASDNDRVIDP
rabbitTLR2   --PRITRFIFRSVKITDESCNEILKLLAYVPELLDLEFDDCTLNGVGDFEVPDRDLSQDL
pigTLR2      --TVMKKFTFRKAEITDASFTEIVKLLNYVSGALEVEFDDCTLNGRGDLSTSALDTIKSL
mTLR2        --SPMKKLAFRGSVLTDESFNELLKLLRYILELSEVEFDDCTLNGLGDFNPSESDVVSEL
MdTLR2       --PLIEKIILREVIVTDKSFIDILKMFSYASELLEIVLEDCILNGLGLWEEDFISEIHHE
chTLR2       --LTIQKLTFTGASFTDKYISQIAVLLKEIRSLRELEAIDCVLEGKGAWDMTEIARSKQ-
XtTLR2       --TSIKYLVFRNCIITDQSASRLLEIFQTYRNITDFILDDSTLYGTGTASPVIGD---DP
fTLR2        --RRIRHLSFQNLSLSDMATVEFLVVFDGVP-LTHISVEGVTLKGVGRWEKANKT---EH
halTLR2      --RRVRNMTFRNLSVSDEATVSVIEILDGVP-LTYFSIDGVTLTGEGRWEKASWA---DF
zebTLR2      --GGTKSLTFQNSSTTDQALTSFLEFMDGSP-LSFIGLEDIQFVGIGEWQKAKYT---HH
hTLR1        --PKLSNLTLNNIETTWNSFIRILQLVWHTT-VWYFSISNVKLQGGQLDFRD------FDY
mTLR1        --LKLSNLTLNNVETTWNSFINILQIVWHTP-VKYFSISNVKLQGGQLAFRM------FNY
hTLR6        --STLLNFTLNHIETTWKCLVRVFQFLWPKP-VEYLNIYNLTIIESIREED------FTY
pigTLR6      --PTLLNFTLNHVETTWKCLVGIFQFLWPKP-VEYLSIYNLTIVESIDEED------FIY
mTLR6        --PTLLNVTLQHIETTWKCSVKLFQFFWPRP-VEYLNIYNLTITERIDREE------FTY
MdTLR1L      --SKSLNLTLYHIEDTWKCFVEILQFLWHKP-IEYLYIYNLTLVGKIGFEL------FTY
hTLR10       --AKTSVLLLNKVDLLWDDLFLILQFVWHTS-VEHFQIRNVTFGG----KAYLDHNSFDY
ratTLR10     --TKASTLIFHKVDLLWDDLLHVFQFVWRTS-VECFQIQDLTFGG----MASRDHSSFDY
MdTLR10      --SKTSHLLLSNVYGPWQEFLQALQFVWHSS-IQQLQIQNFTLGA----QSEFKTKIFDY
chTLR1L1     --IKTTDLTLDTVDLEWTVILQIFLLVWDSS-VEHLTVRNLIFRGPVVELTEYKHVPLLR
XtTLR1L3     --SKVVNLIISNSTMPGNEMLKIIPPIWDSS-VEHLHIKMFRLIKEFKYVK-----MDF
XtTLR1L1     --SKVVNLIISNGAMPGNEIFKIMPPIWDSS-IEHLYIKIFRLQNELKYVK-----MDF
XtTLR1L2     --SKVTDLTMRHVNVEWKMIVLALQYIWHSS-VETLTFYDFSLKGLIAKTS-----FDY
fTLR1        ----TSCLYLTHISINWPDFTQYVHVALNTT-VTHLGVSGVTMYRLPQNAT-------PV
tetTLR1      ----TSRLFLTNVSINWSDFTRCVTVALNTT-VSHLSVSDVTLHRLPQTDT-------PM
tetTLR14     -----AYQLIFHRGKFNENLLRMALLNLK--AIKRLRFQYIDFARSPTFVDNG-------
fTLR14       -----AYQLIFHRGKFNENLLRMALLNLE--AIKRLRFQYIDFARSPTFVDNR-------
XtTLR14      -----IKELTFYRGKFNENLLRLTLKNVEKSNIQDLFLLSIDFARS--LSTNR-------
XtTLR14L1    -----TRELVFYRGKFNENLLWIMLENIQRSSILDLSLLSVDFSRS--HSANK-------
XtTLR14L2    -----IRELIFFRGMFTENLLHQALHSIQKSTIQDLLLLSVKFDRS--LNTNN-------
XtTLR14L3    -----VRELIFNRGKVNQKLLQLILETIQTSSIQDLSLLSVDFDYS--DVRTT-------
XtTLR16      SSLEFLNLNHNHIHIVDPDLLYTLPKLKELHLSYSLLHMNLCPLSYQDNFTSS-------
chTLR15      IDVEAICHFPFSNFSFLNISNNPINSLETVCLPESITVIDLSFTNISTIPANFAK-KLSK


MdTLR7       LEVLDLGT----NFIKIADLSVFKNFPA-LKNIDLSVNKISPR--ESSQNGFCS------
hTLR7        LEVLDLGT----NFIKIANLSMFKQFKR-LKVIDLSVNKISPSG-DSSEVGFCS------
chTLR7       LTVLDLGT----NFIKIADLRVFKKFRS-LKIIDLSMNKISPSSGEGNFYGFCS------
XtTLR7       LTLLDLST----NFIKVADFSLFPKFKS-LQTIILSNNKISPSS--EANIDSCS------
tetTLR7      LEVLDLGT----NFIKMTNLSILMELKS-FKIINLSNNKISSPSDGQEPVGLSGGQSWEW
fTLR7        LEVLDLGT----NFIKMTNLSILMELKS-FKIINLSNNRISSPSDGQAAVGFSGGQAWEW
hTLR8        LSTINLGI----NFIKQIDFKLFQNFSN-LEIIYLSENRISPLVKDTRQS---------Y
pigTLR8      LKFINLGI----NFIKQIDFTIFSEFSN-LSIIYLSENRISPLVNNTGQK---------N
mTLR8        LATINLGI----NFIEKIDFKAFQNFSK-LDVIYLSGNRIASVLDGT-------------
MdTLR8       LQIINLGV----NFISRINLTLFKDFRN-LTVIYLSENRISPPVTGKYLS---------F
XtTLR8       LKILNLGT----NFIRQVDFKIFQQFTG-LELIYLSENRITPFSEKNN------------
tetTLR8      LSVLNLGT----NFIIRADSSIFKKLSH-LKMIYLGENRLYPIPEQNP------------
fTLR8        LSVLNLGT----NFIIQADSSIFKKLSH-LKMIYLGENRLYPIPEKNM------------
hTLR9        LQTLRLQM----NFINQAQLGIFRAFPG-LRYVDLSDNRISGASELT----ATM-GEADG
pigTLR9      LQTLRLQM----NFINQAQLSIFGAFPG-LLYVDLSDNRISGAARPV----AIT-REVDG
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mTLR9         LHTLHLQM----NFINQAQLSIFGTFRA-LRFVDLSDNRISGPSTLS----EATPEEADD
ratTLR9       LHTLHLQM----NFINQAQLSVFSTFRA-LRFVDLSNNRISGPPTLS----RVAPEKADE
MdTLR9        FQKLLLPM----NFISKADLGIFGLFHS-LQFVDLSDNKVTGGSNAGRVNGALLEEEGAS
fTLR9         LKKLELRM----NFIDNIMKALHQVPS-LVHIDLSQNRLSFIPQCSVSPAERESHHNQN
tetTLR9       LTRLELRM----NFINTFDLKALKRVPS-LTSINLSQNILSVFSDCPISSAEREICHNQS
XtTLR9        LREISLRT----NFILKVNLSMLFTHKP-LRFISLSENLISFE---------EHKHGQK
mTLR3         LEYLNMDD----NNIPSTKSNTFTGLVS-LKYLSLSKT-FTSLQTLTNET----------
hTLR3         LEHLNMED----NDIPGKSNMFTGLIN-LKYLSLSNS-FTSLRTLTNET----------
MdTLR3        LEYLSMED----NSFSGITTNMFTGLTN-LKSINLSSS-FANLQILTNTT----------
chTLR3        LEYLIMDN----NNFPRITTNMFTGLKN-LKYLSLYNC-NTNLQRITNKT----------
XtTLR3        VQYLNMEA----NKMIAITEHTFIGLTS-LTNLSLSDS-TLQQHTLTNRT----------
fTLR3         LESLVLQK----TAIREITTQTFTGLTS-LKELDLSWSSCLSLKTITNET----------
tetTLR3       LESLVLQK----TAIWKITPQTFTGLTS-LMELDLSWSSCVSLKNITNQT----------
zebTLR3       LEYLCMAN----TAFRELTEQIFSGLRN-LKTLDLSWS-ITGIKTVTNKT----------
cfishTLR3     LEYLYMEK----TSFREITENIFYGLPC-LRELNLGWS-STGLKIVSNTT----------
hTLR5         LKVLNLAY----NKINKIADEAFYGLDN-LQVLNLSYNLLGELYSSNFYG----------
mTLR5         LKMLNLAF----NKINKIGENAFYGLDS-LQVLNLSYNLLGELYNSNFYG----------
MdTLR5        LKVMNLSH----NKVNKIANGAFYGLDN-LQILNLSYNLLGELYQSDFAG----------
XlTLR5        LKVLNLAE----NKINRIEKDAFYGLNS-LINLNLAHNLLGELYDYSFNS----------
XtTLR5        LKLLNLAE----NKINRIENKAFCGLNS-LITLNLSYNLLGELYDYSFEG----------
fTLR5         VVILDVSR----NKVSQIQTSAFNGLQGHLRLLNLSFNLLGEIYADTFGS----------
tetTLR5       MRILDLSR----NKINQIETRAFDGLQADLRLLNLSSNLLGEIYAHTFSS----------
troutTLR5     VEDITIAQ----NKINQIDREAFFGLQN-VQKLNLSHNLIGEIYSYTFDN----------
mTLR13        LEFLSLSR----NPITELNNLAFSGLFA-LKELNLAACWIVTIDRYSFTQ----------
ratTLR13      LEFLSLSR----NPITELNNLAFSGLFS-LKELNLAACWIVTIDRYSFTQ----------
MdTLR13       LQSLSLSR----NPITELNNLSFYRLHE-LKELNLAGCWIVAIDSYSFSQ----------
XtTLR13       LQYLDLSK----NYLTHLNEKAFSGLRR-LNYLSLKGCKITAATRNNFRY----------
chTLR21       LQVLWLNI----NSLVWLDRQALWRLHN-LTELRLDNNLLTDLYHNSFID----------
XtTLR21       LQTLYLNI----NNIVFLERYSFSGLGK-LRELRLDNNLITDLYENSFAN----------
fTLR21        LKTLWLNI----NTIAFLHQKALSGLRQ-LSTLRLDNNLLSDLFADTFED----------
fTLR23        LVELYLDS----NRITSLQQCSFENLLK-LRILDLNNNLLWKIEGVFSRG----------
tetTLR23      LVELQLSS----NRISSLDQCIFRRMVS-LRVLDLGHNLLWMVDGVFSLG----------
fTLR22        LRHLKLNA----NLISALPSCVFKEVTK-LEVLKLQNNSISQLNTAFKMY----------
tetTLR22      LRQLNLYA----NSISALSHCVFKDLTQ-LRVLKLQNNSISKLSGAFQLY----------
halTLR22      LRRLRLYH----NSIASLAECVFKDLVQ-LQVLKLQNNHLSNLNGAFRDC----------
troutTLR22    LTQLFLFH----NQISNLPGCVFQDLKD-LRILKLGSNKILTLNDDFMSG----------
XtTLR22       LKELDLSG----NKMTFFLSSGLGNWN--LQDLNLRENYLLDISASFASS----------
mTLR12        LRELLLRY----NQLLSLEGYLFQELQQ-LETLKLDGNPLLHLGKNWLAA----------
mTLR11        LQELWLSG----NNISSLSNESLQGLRQ-LRTLDLSWNQIKVLKPGWLSH----------
hTLR4         WQHLELVN----CKFGQ---FPTLKLKS-LKRLTFTSNKGGNAFSEVDLPS---------
rabbitTLR4    WKSLEFIN----CEFSEN--IFFLKLSS-LRRLIFTANKGVRTFPELNTPS---------
pigTLR4       WQHLEVVN----CKLQQ---FPALKFNS-LKKFVFKDNKHMHTFTEINLPN---------
mTLR4         WQSLSIIR----CQLKQ---FPTLDLPF-LKSLTLTMNKGSISFKKVALPS---------
MdTLR4        LFSLSLTD----CNFDIMPDLPSISLPS-LKELKVTHHKDLTTLSDLALPN---------
chTLR4        VKHLEWKK----CKFQELPAEKLSLFKE-LRVLRITKSKDLNGFEQKFGSLT--------
XtTLR4        LQSVYIKN----CTLTNIPSLFLSKCPS-LREVRITGIQKLSNFNRELTGLR--------
zebTLR4       LKELYLSD----TGLSVVP--FISHIPS-LEKLVMKSPFPITFTGVSDLPLP--------
hTLR2         GKVETLT-----IRRLHIPRFYLFYDLS-TLYSLTERVK--------------------
rabbitTLR2    GKVETLT-----IRRLHIPKFYLFYDLS-TIYSLSERVK--------------------
pigTLR2       GNVETLT-----VRRLHIPQFFLFYDLR-SIYSLTGAVK--------------------
mTLR2         GKVETVT-----IRRLHIPQFYLFYDLS-TVYSLLEKVK--------------------
MdTLR2        VKVETII-----IRRLRIGNFFLFRDLS-PVYSLLQGIK--------------------
chTLR2        SSIETLS-----ITNMTILDFYLFFDLE-GIETQVGKLK--------------------
XtTLR2        FSVTTAI-----INKLHIPKFFLFSDLQ-GIYKLASNFK--------------------
fTLR2         KGIDEIF-----VRDVEVLDIYKFASLI-SCGFLLQYPR--------------------
halTLR2       HSIDEFF-----IQNIVVLDVFKFVSLL-RLKFLLQYPR--------------------
zebTLR2       DSLRTAY-----LRNIEIEGFFGFSSMI-ELGFLLKHFH--------------------
hTLR1         SG-TSLKA----LSIHQVVSDVFGFPQS-YIYEIFSNMN--------------------
mTLR1         SD-TSLKA----LSIHQVVTDVFSFPQS-YIYSIFANMN--------------------
hTLR6         SK-TTLKA----LTIEHITNQVFLFSQT-ALYTVFSEMN--------------------
pigTLR6       YE-TTLKG----VKIEHITKRVFIFSQT-ALYRVFSDMN--------------------
mTLR6         SE-TALKS----LMIEHVKNQVFLFSKE-ALYSVFAEMN--------------------
MdTLR1L       NE-TLLKG----LKIEFINIKVYIFLQS-NIYNIFSNMN--------------------
hTLR10        SN-TVMRT----IKLEHVHFRVFYIQQD-KIYLLLTKMD--------------------
ratTLR10      SN-TVMKA----VILESIHFRIFFIPQN-KIYLFFTQMD--------------------
MdTLR10       SN-TSMKV----IKVEHVSIKIYSFPQD-RIYLFFTQMG--------------------
chTLR1L1      SLGSSMKA----LTLERVRNKLYYFNQE-ILYRQFSEMN--------------------
XtTLR1L3      TH-HSIKS----FTLEYFTNDVFFFQGT-HPFNIFAEML--------------------
XtTLR1L1      LH-HSIKS----LTVEDLTNEVVSFRDT-HPLQMFAEML--------------------
XtTLR1L2      SN-TSVKA----VNVQGVNVGVFQFDQS-SVYRVFSNMN--------------------
fTLR1         AETSRVKS----LTFRRAVVRSFLFSQE-AVYNFFINMP--------------------
tetTLR1       ANTSRVKS----VTVREVTVKSFLFSQE-AVYNFFINMP--------------------
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tetTLR14      -EASSITN----LDLDKLDLWYISNPDVLRFDWRFTWFN--------------------
fTLR14        -AGSSITD----LVLDKLDLWYISNPDVLRFDWRFTWFN--------------------
XtTLR14       -TDIRIND----LALRRLVIKDVTNPDILRFDWTFTWFN--------------------
XtTLR14L1     -TNVSIDD----LRLRTLRVKDVTNPDILRFDWTFTWFR--------------------
XtTLR14L2     -THILFDR----LYLNSLVIRDIAGPHIFKYDWTFTWFS--------------------
XtTLR14L3     -VDVKMDN----LFLRSLVIKDATNPDILTFDQTFTWFS--------------------
XtTLR16       VEALYFIG----NRITVLKNKQFFCMTK-LTDLLLARNGIEHIEESAFWG----------
chTLR15       LERMYVQGNQLIYTVRPENPSATPRPPPGTVQISAISLVRNQAGTPIESLP---------


MdTLR7        WARTSTEFQT--SFENIHYFRYDEFARRCKFKSKEE--PFLPLLRNDCESYG-ELDLSRN
hTLR7         NARTSVESYEPQVLEQLHYFRYDKYARSCRFKNKEA--SFMSVN-ESCYKYGQTLDLSKN
chTLR7        DHRITVEQYSRHVLQEMHYFRYDEYGRSCKSKDKEAD-SYQPLVNGDCMSYGETLDLSRN
XtTLR7        ASQVSSGHYIGRTFQEVHYFEYDENARKCKAKDKENF-TFKLFLNESCQAYGQSLDLSQN
tetTLR7       SPMLAADQYQNDQVREIHYFRYDEYARSCKYKDKELG-VIASFVKKECSQFGKTLDVSRN
fTLR7         SPMLPADQYQNEEVREIHYFRYDEYARSCKYKDKELG-VIASFVKRECSQFGKTLDVSRN
hTLR8         ANSSSFQRHIRK-RRST-DFEFDPHSNFYHFTRP-------LIKPQCAAYGKALDLSLN
pigTLR8       GDRPSFQSHVLK-PRSA-TPKFDPHSNFYHNTKP-------LIKPQCSRYGKALDLSLN
mTLR8         -DYSSWRNRLRK-PLSTDDDEFDPHVNFYHSTKP-------LIKPQCTAYGKALDLSLN
MdTLR8        AHHAIHPRSVDTDNEPLARGIIDPHKNFYHYSRP-------LVKPECSSYGKALDLSLN
XtTLR8        -KMKLVEGYEDKHSRVSSPGVSFPTQNFQMTKTFS-----EVVKPQCSSRGKTLDLSLN
tetTLR8       -QVPNVWYTQRSDFSNSQYRNSHGEDFKFRIAHT--------LIKQECFDAGKVLSLNSN
fTLR8         -PSLSRQYNQRLDFSVSSYMKPHGRDYFFKISQT--------LIKQECFDAGKVLSLNSN
hTLR9         GEKVWLQPGDLAPAPVDTPSSED------------------FRPNCSTLNFTLDLSRN
pigTLR9       RERVWLPSRNLAPRPLDTLRSED------------------FMPNCKAFSFTLDLSRN
mTLR9         AEQEELLSADPHPAPLSTPASKN------------------FMDRCKNFKFTMDLSRN
ratTLR9       AEKGVPWPASLTPALPSTPVSKN------------------FMVRCKNLRFTMDLSRN
MdTLR9        QDPLPTLGVNRAPEVIAETLLEEEG-ASQDHPLT------SELFMPNCGPPNFTLDLSQN
fTLR9         VRDLSFSQPFLMETKPNVTFGFNFLDQSHRLETSPSFPTQSSPLWETFCKNKVTFDLSQN
tetTLR9       TCNLGSSNPSLVRKGQNVTFERDFLDQFDRLEMS---SPQSSLLWKKFCQKKVTFDLSQN
XtTLR9        LA----MHPPLFDRGNQVDGG--WMDSHCGPKQV----EAGEVEYPGCWQYNHSVDLSFN
mTLR3         ----------------------------------------FVSLAHSP-LLTLNLTKN
hTLR3         ----------------------------------------FVSLAHSP-LHILNLTKN
MdTLR3        ----------------------------------------FSSLAYSP-LLILNLTRN
chTLR3        ----------------------------------------FVSLANSR-LQVLNLTKT
XtTLR3        ----------------------------------------FLSLSKSP-LYHLNLTKT
fTLR3         ----------------------------------------FLSLAASP-LRKLNLTGA
tetTLR3       ----------------------------------------FVSLAGSP-LRKLNLTGT
zebTLR3       ----------------------------------------FAGLKESPLLQTLNLTGM
cfishTLR3     ----------------------------------------FASLNGSSLLQMLNLTGM
hTLR5         -----------------------------------------LPKVAYIDLQKN
mTLR5         -----------------------------------------LPRVAYVDLQRN
MdTLR5        -----------------------------------------LSKVAYIDLQRN
XlTLR5        -----------------------------------------LTVVTVIDLEQN
XtTLR5        -----------------------------------------LPDLTXIDLQQN
fTLR5         -----------------------------------------LSELRVLDLSYN
tetTLR5       -----------------------------------------LAELRVLDLSQN
troutTLR5     -----------------------------------------LPNILELDISYN
mTLR13        -----------------------------------------FPNLEVLDLGDN
ratTLR13      -----------------------------------------FPNLEVLDLGDN
MdTLR13       -----------------------------------------FLSLENLNLREN
XtTLR13       -----------------------------------------FSNLRVLDLQDN
chTLR21       -----------------------------------------LHRLRTLNLRNN
XtTLR21       -----------------------------------------LTELRILNLRNN
fTLR21        -----------------------------------------LFNLNILNLRNN
fTLR23        -----------------------------------------PAKLQLLDLSRN
tetTLR23      -----------------------------------------PAGLRSLDVSRN
fTLR22        -----------------------------------------LPNLKQLHLNSN
tetTLR22      -----------------------------------------LQNLRQLHLNSN
halTLR22      -----------------------------------------LPNLRQLLLNGN
troutTLR22    -----------------------------------------LHKLEFLSMSYN
XtTLR22       -----------------------------------------LPTLQRLTISKN
mTLR12        -----------------------------------------LPALTTLSLLDT
mTLR11        -----------------------------------------LPALTTLNLLGT
hTLR4         -----------------------------------------LEFLDLSRN
rabbitTLR4    -----------------------------------------LEFLDISNN
pigTLR4       -----------------------------------------LQFLDLSGN
mTLR4         -----------------------------------------LSYLDLSRN
MdTLR4        -----------------------------------------LQILDLSKN
chTLR4        -----------------------------------------HLEVVDLSEN
XtTLR4        -----------------------------------------ELKVLDFSNN
zebTLR4       ------------------------------------------QYVDLSGN
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hTLR2        ------------------------------------------------------RITVENS
rabbitTLR2   ------------------------------------------------------RVTVENS
pigTLR2      ------------------------------------------------------RITIENS
mTLR2        ------------------------------------------------------RITVENS
MdTLR2       ------------------------------------------------------RITLTSS
chTLR2       ------------------------------------------------------RLSIASS
XtTLR2       ------------------------------------------------------NIACIDS
fTLR2        ------------------------------------------------------KVSIINA
halTLR2      ------------------------------------------------------RVSVINS
zebTLR2      ------------------------------------------------------NVSVINA
hTLR1        ------------------------------------------------------IKNFTVSGT
mTLR1        ------------------------------------------------------IQNFTMSGT
hTLR6        ------------------------------------------------------IMMLTISDT
pigTLR6      ------------------------------------------------------IRMLTIADT
mTLR6        ------------------------------------------------------IKMLSISDT
MdTLR1L      ------------------------------------------------------INMLTITDS
hTLR10       ------------------------------------------------------IENLTISNA
ratTLR10     ------------------------------------------------------LENLTISDA
MdTLR10      ------------------------------------------------------TENLTISGA
chTLR1L1     ------------------------------------------------------IDSLTIHDA
XtTLR1L3     ------------------------------------------------------VENVTFSNA
XtTLR1L1     ------------------------------------------------------VENITFSRA
XtTLR1L2     ------------------------------------------------------IENLTLNFA
fTLR1        ------------------------------------------------------VENLALTET
tetTLR1      ------------------------------------------------------VESLALTDT
tetTLR14     -----------------------------------------------------RIKSISIQYV
fTLR14       -----------------------------------------------------NIRSLSIQYV
XtTLR14      ------------------------------------------------------KVSHLDIINV
XtTLR14L1    ------------------------------------------------------KISNLYIINV
XtTLR14L2    ------------------------------------------------------KVRNLQLSRV
XtTLR14L3    ------------------------------------------------------KVSNLYIINV
XtTLR16      ---------------------------------------------------LNDLRVLDLRNN
chTLR15      ------------------------------------------------------ESVKHLKVSNC
                                                                    .

MdTLR7       NLFFVKPSDFEDLSF----LKCLNLSGNSISQTLNGSEFQ----------PLAKLKYLDF
hTLR7        SIFFVKSSDFQHLSF----LKCLNLSGNLISQTLNGSEFQ----------PLAELRYLDF
chTLR7       NIFFVNSIDFQDLSF----LKCLNLSGNAISQTLNGSEFY----------YLSGLKYLDF
XtTLR7       NIFFVKATDFTNLSF----LKCLNLSGNAISQTLNGSEFR----------NLNRLKYLDF
tetTLR7      NIFFLHSR-FLNLRE----LKCLNLSGNAMSQSLNGSEFT----------YLSGLQYLDF
fTLR7        NIFFLHSR-FLNLRE----LKCLNLSGNAMSQSLNGSEFT----------YLTGLQYLDF
hTLR8        SIFFIGPNQFENLPD----IACLNLSANSNAQVLSGTEFS----------AIPHVKYLDL
pigTLR8      SIFFIGPNQFEAFKD----IACLNLSSNGNGQVLHGSEFS----------HLPGIKCLDL
mTLR8        NIFIIGKSQFEGFQD----IACLNLSFNANTQVFNGTEFS----------SMPHIKYLDL
MdTLR8       SMFFINSLQFQSFND----VKCLNLSFNGNAQVLNGSEFL----------SMPHIKYLDL
XtTLR8       SIFFIDPKEFRSFSD----VSCLNLSSNGIGQDLNGTEFI----------YLKNLTYLDL
tetTLR8      NFLFISTKQFEG--D----IACLNLSGNGFSSALNGSEFS----------FLPNLTYLDL
fTLR8        NFLFISTKEFEG--D----IKCLNLSRNGFAPALNGTEFS----------FLPNLTYLDL
hTLR9        NLVTVQPEMFAQLSH----LQCLRLSHNCISQAVNGSQFL----------PLTGLQVLDL
pigTLR9      NLVTIQSEMFARLSR----LECLRLSSNGNGQVNGSQFV----------PLTSLRVLDL
mTLR9        NLVTIKPEMFVNLSR----LQCLSLSHNSIAQAVNGSQFL----------PLTNLQVLDL
ratTLR9      NLVTIKPEMFVNLSH----LQCLSLSHNCIAQAVNGSQFL----------PLTNLKVLDL
MdTLR9       NLVTVQQEIFVNLSA----LKCLRLSSNSISQAVNGSQFS----------PLTNLWLLDL
fTLR9        DIMSVNQEVLAGMEN----AVCLDLSFNYMSQALKYGMFS----------SMKHLVFLNL
tetTLR9      NIISVNRKVLAGMEH----VACLDLSFNYMSQTLRSGMFD----------GMKYLVFLNL
XtTLR9       NIGSIYPDEFLGMDE----IECLNMSYNYINQRLNGTQFG----------HLKSLRHLDL
mTLR3        HISKIANGTFSWLGQ----LRILDLGLNEIEQKLSGQEWR----------GLRNIFEIYL
hTLR3        KISKIESDAFSWLGH----LEVLDLGLNEIGQELTGQEWR----------GLENIFEIYL
MdTLR3       KISQIESGAFSWLGH----LEVLDLGVNEISQELTGQEWK----------GLENIMEIYL
chTLR3       RISTVESEAFSSLGQ----LKILDLGLNEINQELTGHEFE----------GLNNIEYIYL
XtTLR3       GLTKIENGAFLCLKH----LQLLDMGLNQIDQEVSGNELE----------GLANIEMIYL
fTLR3        AVVQISPGGFSTLKS----LTVLLLDSNFIKQTLTGREFE----------GLGGQLEEIHM
tetTLR3      AITQISPGGFSALRN----LTVLLLDSNFIRQTFSGRELE----------GLAQLEEMHM
zebTLR3      GINKLEPGAFSSFGN----LSNLLMSRNFINQQLQGNEFK----------GLSNIKEIDM
cfishTLR3    GIKTLEPGAFSSLGN----LEILVLSHNYINQQLTGEEFQ----------GLNSIREIHL
hTLR5        HIAIIQDQTFKFLEK----LQTLDLRDNALTTIH--------------FIPSIPDIFL
mTLR5        HIGIIQDQTFRLLKT----LQTLDLRDNALKAIG--------------FIPSIQMVLL
MdTLR5       HIGIIEKQTFKHLKN----LQTLDLRDNAIKTVY--------------FLPSVHTAFL
XlTLR5       HIGAIQINTFKSLSE----LNTLNLRGNSMKTIT---FFE----------SPVSIGYIFV
XtTLR5       HIGAIQNNAFKSLEK----LNYLDLRGNAMKKVT---FFE----------ALIPITYIFF
fTLR5        HIGALGSKAFSGLPE----LRGLYLTGNSLRKLGFP---A----------SLPKLEFLLL
tetTLR5      HIGALGHQAFSGLPK----LRGLFLTGNSLRNLGFP---A----------SLPNLELLLL
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troutTLR5    HIGALGYQAFKGLPN----LQVLDLTGNSIRGLGTYGSLA----------PLPNIQLLRL
mTLR13       NIRTLNHGTFRPLKK----LQSLILSHNCL-KILEPNSFS---------GLTNLRSLDL
ratTLR13     NIRTLNHGTFQPLKK----LHTLILSHNRL-EIMESNAFS---------GLTGLRYLDL
MdTLR13      NLRTLKKNTFLFLKN----LQVLTLSYNRL-ATIEKSAFS---------GLPKLYKLDL
XtTLR13      SISLIKSNAHIYLRK----LETLLLSGNKI-LTIQKNGLK---------GLVSLKELSL
chTLR21      RVSVLFSGVFQGLAE----LQTLDLGGNNL-RHLTAQSLQ---------GLPKLRRLYL
XtTLR21      RVSVIFSKVFYNLGK----LTTLDLGGNKI-TQLKNQSFY---------GLRSLSKLYL
fTLR21       RISVIFNNTFRNLKN----LTTLDLGGNKI-THFEPSGLC---------GLERLSKLYL
fTLR23       SVSVYDDGYFQSLGW----LTHLDVSSDKV-GRVTPGAFV---------GLHRLKSLHV
tetTLR23     MVTVYDDGSFQGLGG----LMYLDVSSENG-GRVTPGAFL---------GLDRLRSLHV
fTLR22       KLVAINHGEFGGLRS----LQNLSLHSNQI-KKLGMGSFL---------GLKNLTDIHL
tetTLR22     RLAAISRG----------------------------------------------------
halTLR22     QLTALKHGEFRGLQS----LQNLSLHENKI-FNLDKGCFV---------GLTNLTDILL
troutTLR22   KLSSISKGDFKGLAS----LKTLLLFDNQI-ASLEDGAFE---------GLVNLTELRL
XtTLR22      KLSSLSTNTFQNVTF----LKHLNLADNQI-EVIDPGAFS---------GLDKLRTLII
mTLR12       QIRMSPEPGFWGAKN----LHTLSLKLPAL-PAPAVLFLP---------MYLTSLELHI
mTLR11       YLEYILGIQLQGPKM----LRHLQLGSYPI-LDIYPPWPP---------TLLS-LEIQA
hTLR4        GLSFKGCCSQSDFGT--TSLKYLDLSFNGV-ITMSSN-FL---------GLEQLEHLDF
rabbitTLR4   GLSLQSCCSVNSLRL--TQLKHLNLSFNGV-ITMTSN-FV---------GLEQLEHLYF
pigTLR4      HLSFKGCCSHNEFGT--TKLKHLDLSFNEI-ITMKSN-FM---------GLEQLEYLDF
mTLR4        ALSFSGCCYSDLGT--NSLRHLDLSFNGA-IIMSAN-FM---------GLEELQHLDF
MdTLR4       SLNVLSCCSDKTFNT--PNLKYLNLSYNAH-ISLSKN-FM---------GLENLESLDL
chTLR4       RLSFLTCCSPKFPRS--PNLKHLNLSFNSD-ISLTGE-FA---------NLRNLLYLDL
XtTLR4       QLNMNYYCTQLVAGTKESRIQHLNLSYNSF-IGFDSA-FI---------NMPHLQSLDL
zebTLR4      MLILHECCSILFPRT--PNIQYLNLSQNSE-ITFVNEPFS---------ALDLLEVLDF
hTLR2        KVFLVPCLLSQHLKS----LEYLDLSENLMVEEYLKNSACED-------AWPSLQTLIL
rabbitTLR2   KVFLVPCSFSQHLKS----LEYLDLSENLMVEEYLKNSACEK-------AWPSLQTLIL
pigTLR2      KVFLVPCSLSQHLKS----LEYLDLSENLMSEEYLKNSACEH-------AWPFLHTLIL
mTLR2        KVFLVPCSFSQHLKS----LEFLDLSENLMVEEYLKNSACKG-------AWPPLQTLVL
MdTLR2       KVFLVPCDLSKSLKS----LEYFDLSDSLMSEGALENSACEG-------AWPSLHTLNL
chTLR2       KVFMVPCRLARYFSS----LLYLDFHDNLLVNNRLGETICED-------AWPSLQTLNL
XtTLR2       KVFLMPCAFSRSFSS----LQYLDLSGNLLSDNLLASSACAFEG---GG-AWPILQTLNV
fTLR2        KVFVMPCFTSHLLKN----LQYLDLSNNLLTDMTLAETLCDGDS------PLKDLRVLNI
halTLR2      RMFVIPCDTTFLMSS----LQYLDLSDNLLTDMTLVETLCSKRG------ALKDLRVLNI
zebTLR2      TVFVIPKETTFLLKN----LEYMDLSQNLLTDLTIQPTLYTGSG------AYQNLNMLNV
hTLR1        RMVHMLCPSKISP------FLHLDFSNNLLTDTVFENCG-----------HLTELETLIL
mTLR1        HMVHMLCPSQVSP------FLHVDFTDNLLTDMVFKDCR-----------NLVRLKTLSL
hTLR6        PFIHMLCPHAPST------FKFLNFTQNVFTDSIFEKCS-----------TLVKLETLIL
pigTLR6      HFIHMLCPQVPST------FNFLNFTQNVFTDSVFQNCK-----------TLARLETLIL
mTLR6        PFIHMVCPPSPSS------FTFLNFTQNVFTDSVFQGCS-----------TLKRLQTLIL
MdTLR1L      RMLHMSCPFKPSP------FQYLNFANNLFPDTIFPDCK-----------NLSLLQTLIL
hTLR10       QMPHMLFPNYPTK------FQYLNFANNILTDELFKRTI-----------QLPHLKTLIL
ratTLR10     QMPHLLFPSHPQS------FQHLNFANNILTDDLFKNPI-----------QMPYLKTLVL
MdTLR10      GMPHIIFPDYPSK------FQHLNFTNNALTDELFRKTL-----------LLPHLKTLVL
chTLR1L1     CMPHMLCPKKRSS------FQYINFSRNALTDELFQNCD-----------TLANLKILIL
XtTLR1L3     GMIHFFCPPVPSI------VRFLNLPSNRITDEIFLNCS-----------SLNELELLNL
XtTLR1L1     ELYFFFCPPAPSI------FRVINLPSNRLTDDIFQNCA-----------NLKELELLNL
XtTLR1L2     SLLFMVCPLNSST------FQSIDFSHNALTDDLFKDCF-----------TLINLKRLKL
fTLR1        SIIHMTCPKSESP------ITQLNFSYCSMTDTIFSRVEGLITV---ECKTLGNVRTLAL
tetTLR1      AIIHMTCPKSQSP------VTHLSFSHCSLSDTIFSRVEGLITI---ECKTLGNLRTLTL
tetTLR14     YFNSVPCDSWVEMKE----LTVLDVSNNRLTDAYVFNQLCNYKG------TAPNLRLFNM
fTLR14       YFNSVPCDSWAEMKQ----VKVLDVSNNRLTDTYIFNQLCNYKG------AAPNLRLFNM
XtTLR14      NFNFVPCDAWSQMVN----VERLDISNNRLLASNLYNLLCQYS-------ELPNLHTFIA
XtTLR14L1    NFNSVPCDAWSEMSN----LEKLDMSTDELVDTYLYNPWCQDV-------ALPTTDTFIL
XtTLR14L2    HLGSLPCIAWRQMGN----IECLDVSDNRLIGSNLYNPSCWDG-------GLPKLDTFIA
XtTLR14L3    NFNFAQCDTWSQMKN----VERLDIRNNLLLSSDLYNPSCKYG-------ELPKLHTFTA
XtTLR16      RLTSLQISSLSGLSN----LMELYLQNNVMESMQRYSLKWQTKLRLVKIGFVSVSVSFEL
chTLR15      SIVELPEWFANRMQE----LLFLDLSSNRISMLPDLP--------------ISLQQLDI
                 .

MdTLR7       SNNKLDLLH---STAFQELQ-ELEVLDISGNSHYFQSEGITHMLNFTKNLQVLKKLMMNG
hTLR7        SNNRLDLLH---STAFEELH-KLEVLDISSNSHYFQSEGITHMLNFTKNLKVLQKLMMND
chTLR7       SNNRIDLLY---STAFKELK-FLEILDLSNNKHYFLAEGVSHVLSFMKNLAYLKKLMMNE
XtTLR7       SNNRIDLLY---STAFQELT-ELEVLDLSNNDHYFLAEGITHVFNFTKNLEKLTKLMMNN
tetTLR7      SSNRLGLLY---STAFQELK-SLVILDISYNNHYFESEGLTHMLNFTGNLRNLKILMMNH
fTLR7        SSNRLDLLY---STAFQELK-NLVILDISNNNHYFESEGLTHMLNFTQNLKNLKILMMNH
hTLR8        TNNRLDFDN---ASALTELS-DLEVLDLSYNSHYFRIAGVTHHLEFIQNFTNLKVLNLSH
pigTLR8      TNNRLDFDD---DAAFSELP-LLEVLDLSYNSHYFRIAGVTHRLGFIQNLPQLRVLNLSH
mTLR8        TNNRLDFDD---NNAFSDLH-DLEVLDLSHNAHYFSIAGVTHRLGFIQNLINLRVLNLSH
MdTLR8       THNQLDFDS---DRAFQELQ-ELEVLDLSHNEHYFQIAGVTHRLGFIQNLAHLKVLNLSQ
XtTLR8       SFNKLDFDS---INAFQELP-SLEVLDLSYNSHYFIVDGVIHSLKFIENLQHLKVLNLSW
tetTLR8      SFNKIDLAY---NFAFSELK-KLQVLDISYNPHYFKVFGITHKISFLRNLPVLRVLNMSH
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fTLR8       SFNKIDLAY---SLAFNDLK-KLQVLDLSYNPHYFNVQGITHKVNFLRNLPVLRVLNMSH
hTLR9       SHNKLDLYH---EHSFTELP-RLEALDLSYNSQPFGMQGVGHNFSFVAHLRTLRHLSLAH
pigTLR9     SHNKLDLYH---GRSFTELP-RLEALDLSYNSQPFTMQGVGHNLSFVAQLPALRYLSLAH
mTLR9       SHNKLDLYH---WKSFSELP-QLQALDLSYNSQPFSMKGIGHNFSFVTHLSMLQSLSLAH
ratTLR9     SYNKLDLYH---SKSFSELP-QLQALDLSYNSQPFSMQGIGHNFSFLANLSRLQNLSLAH
MdTLR9      SHNKLDLYY---SSSFTELP-RLRALDLSYNSQSFKAHGIGHNLTFVSRLRSLRYLSLAH
fTLR9       SYNRLDFYY---NESFSELNNTLKLLDLSNNDFHFKMRGMGHRLTFIKKKVNLEVLSLAN
tetTLR9     SYNRLDLYY---DEAFSELKDTLKLLDLSNNDYHFKMKGMGHRLTFIKNLVNLEVLSLAN
XtTLR9      SHNRFDMYY---YKALSELP-RLKILNLAHNDYQFMMKGVNHRLDFLENLTSLVELNLNN
mTLR3       SYN-KYLQL---STSSFALVPSLQRLMLRR----VALKNVDISPSPFRPLRNLTILDLSN
hTLR3       SYN-KYLQL---TRNSFALVPSLQRLMLRR----VALKNVDSSPSPFQPLRNLTILDLSN
MdTLR3      SYN-RYLIL---NSNSFASVPILKRLMLRR----VDCKQLDVSPSPFHPLRNLTILDLSN
chTLR3      SYN-KNVTL---RSESFIFVPSLRKLMLRK----VGCNNLAISPSPFHPLRNLTVLDISN
XtTLR3      SYN-RRITL---TSNSFIFAPSLSKLYLRK----TALTFRDLNPSPFKVLQNLTVLDLSN
fTLR3       SLNFQKVNL---SSASFAAVPRLKVLTLGK---SLTSTALNVDPSPFSPLVNLTFLDLSN
tetTLR3     SLNYQKVNL---SSASFVAVPSLRVLTLGK---SLISTALNLDPSPFSPLVHLSYLDLSN
zebTLR3     SINQQSISL---TNASFVHVSTLRILKLGR---ALKG-TLDMEPSPFRPLVNLTILDLSN
cfishTLR3   SFNQQMITL---CLRRYTCP-TLRTLMLGH---ALSS-NLEVEPSPFRLLVNLTLLDLSN
hTLR5       SGNKLVT-----LPKINLTAN---LIHLSEN----RLENLDILYFLLR-VPHLQILILNQ
mTLR5       GGNKLVH-----LPHIHFTAN---FLELSEN----RLENLSDLYFLLR-VPQLQFLILNQ
MdTLR5      SGNKLVH----IEENINITAG---FLDLAEN----RLANLNDLYILLQ-IPDLKFLILNK
XlTLR5      GGNKLKS-----IDSSFVYSN---FLDLSEN----DLRDLGGLYKLLQ-YPLLQYVILKR
XtTLR5      GGNKLKS-----IDSSYVYST---FLDLSEN----DLNDLGGLFKILQ-YPLLQYVILKR
fTLR5       GDNKLDS-----LYSVMDLAANSTYMDVRDN----RLNNLEDVYMLITDFHRLETLMFGG
tetTLR5     GDNKLDS-----LYGVADLAGNSTYLDVRDN----RLSNLNNVHLLLSRFHHLKELMFGG
troutTLR5   ADNKITS-----LEGLSVFAPSTIILNVQNN----RLTNLEDVYTVLAKLMHIEFLWYGN
mTLR13      MYNSLSYFHE--HLFSG-LEK-LLILKLGFNKITYETTRTLQYPPFIKLKSLKQLNLEGQ
ratTLR13    MYNSLSYFHK--HHFMG-LEK-LLVLKLGFNKITYETTRTLQYPPFMKLKSLKQLNLEGQ
MdTLR13     AYNILSDFHP--GMFLG-LEG-LEVLDLSFNKITYETLKSLQPPPFKDLQTLKRLNLEGQ
XtTLR13     ANNNIYKITD--NTFKF-VKS-LRSLDLSRNQL-WPLHKFQSPTPFLNLTQLEYLDASYQ
chTLR21     DRNRLLEVSS--TVFAP-VQATLGVLDLRANNLQYISQWLRKPPPFRNLSSLYDLKLQAQ
XtTLR21     DGNQIKEISR--YVFSH-VESTLLVLDLKSNHLRYNTTRETYSP-FLTLSKLYDLKLQAQ
fTLR21      DGNNLQTIDS--SAYHI-FQNTLTTLDLRQNMIHFEEDVN-FSP-FVNLTKLEDLKLDEQ
fTLR23      SIPLDYECDF--RG-----LKQLENLTIS-ITISDTRSPPKYSQALFHLKSLRSFHVACQ
tetTLR23    SIPMDYECDF--RG-----LHQLETLTIS-MTMDPGRAPPRYSQALFHLRSLRSLHVSCR
fTLR22      QLNMIETEQI--AGGVFNDLINLRRLDLSNNHIRYYNSRPLRNPPFLHLSLLETLYIPSQ
tetTLR22    ------------------------------------------------------------
halTLR22    QNNQIRETEI--SKGVFNDLINLRRLELRDNHIKYVNNSSLPSAPFSRLSRLETLAIPSQ
troutTLR22  QSNKITQIDI--RNTVLTGLPHLRTLDISCNYITYVNDDKLDPPPLSHLTSLENLLIFSQ
XtTLR22     GSNKITRNTL--HNMTFQGLGSLLELQLFGNYLNYDSSNYLDIVPFLPLKSLKMITLNSQ
mTLR12      ASGTTEHWTL--SPAIF---PSLETLTISGGGLKLKLGSQNASGVFPALQKLSLLKNSLD
mTLR11      ES-CIQFMIH--SGQPF---LFLENLTLETSILLLKP--DNITIHFPSLRRLTLRGYSF-
hTLR4       QHS-------------------------------NLKQMSEFSVFLS-LRNLIYLDISH
rabbitTLR4  QHS-------------------------------NLRNINEFSIFLS-LNNLLYLDISY
pigTLR4     QHS-------------------------------SLKQANDFSIFLS-LRNLHYLDISY
mTLR4       QHS-------------------------------TLKRVTEFSAFLS-LEKLLYLDISY
MdTLR4      QHT-------------------------------ILKDHDKYPAFYS-LINLRYLDISY
chTLR4      QHT-------------------------------KLIHHGTYPVFLL-LQKLIYLDISY
XtTLR4      IHS-------------------------------KIQTVGKFPVFML---LINFLDLSY
zebTLR4     HHT-------------------------------KLVIVFYFGFFKH-LRNLKYLDISY
hTLR2       RQN-------------------------------HLASLEKTGETLLTLKNLTNIDISK
rabbitTLR2  RQN-------------------------------HLTSLEKTGETLLTLKNLTDLDISK
pigTLR2     RQN-------------------------------HLKSLEKTGEVLVTLKNLTNLDISK
mTLR2       SQN-------------------------------HLRSMQKTGEILLTLKNLTSLDISR
MdTLR2      SQN-------------------------------KFESLKTMGELLLTVKNLTHLDISK
chTLR2      SKN-------------------------------SLKSLKQAARYISNLHKLINLDISE
XtTLR2      SRN-------------------------------LLTSLRRLAQITSGLKYLTNLDVSQ
fTLR2       SGN-------------------------------ALKSLSTTSRLVGKLLRLTHLDVSR
halTLR2     SGN-------------------------------ALKSLSTLSRLVERLHKLTHLDISR
zebTLR2     SQN-------------------------------VLKSLGLMSRLVTNLKKLKYLDLSY
hTLR1       QMN-------------------------------QLKELSKIAEMTTQMKSLQQLDISQ
mTLR1       QKN-------------------------------QLKNLENIILTSAKMTSLQKLDISQ
hTLR6       QKN-------------------------------GLKDLFKVGLMTKDMPSLEILDVSW
pigTLR6     QKN-------------------------------KLEDLFKISLMTKDMLSLEILDVSS
mTLR6       QRN-------------------------------GLKNFFKVALMTKNMSSLETLDVSL
MdTLR1L     QKN-------------------------------KLTHLSKIAGMTEKMKSLKHLDLSQ
hTLR10      NGN-------------------------------KLETLSLVSCFAN-NTPLEHLDLSQ
ratTLR10    RGN-------------------------------QLETLSLVSLFAN-HTSLLHLDLSQ
MdTLR10     QRN-------------------------------KLETLSTVSSFAI-NTSLIHLDLSQ
chTLR1L1    HRN-------------------------------KFESLSKVSFMTSRMKSLRYLDMSS
XtTLR1L3    QNN-------------------------------KLEQMSKISSMTLKMKNLKHLDLSK
XtTLR1L1    QNN-------------------------------KLEQMSKISSMTLTMPNLKHLDLSR
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XtTLR1L2      RKN-------------------------------KLEKIYKLSAMTENMPSLEYLDASH
fTLR1         AGN-------------------------------NLKSLKSLSIRMQYMKSLQDLDLSL
tetTLR1       ARN-------------------------------NFKSLQSLSKRMRYMKSLQDLDLSF
tetTLR14      STN-------------------------------ELTSLKDLSLLTKEFQQLQEMDLSR
fTLR14        SNN-------------------------------ELTSLKDLSLLTKEFQQLQELDLSR
XtTLR14       SDN-------------------------------NMRSLYTLSLLTLTWPKLATLDLTS
XtTLR14L1     AYN-------------------------------NLQSLRMLSLLTAKWPKLATLDLRS
XtTLR14L2     ANN-------------------------------NLQSLRLISLLTAKWPKLTKLDLSS
XtTLR14L3     ANN-------------------------------NLQILKPISLLTANWPKLSSLDLSS
XtTLR16       FPNTETLDIQTTGKYITVFMNETAASSLKSLSVNGSHVELDIKCGHQFFSTLRELKVINN
chTLR15       SNSDIKIIPP-----------------------RFKSLSNLTVFNIQNNKLTEMHPEY


MdTLR7        NDISTSTST-----EMESESLKILEFRGNHLDVLWRDGDN-RYLGFFRNLIHLEVLDISQ
hTLR7         NDISSSTSR-----TMESESLRTLEFRGNHLDVLWREGDN-RYLQLFKNLLKLEELDISK
chTLR7        NEISTSIST-----GMESQSLQTLEFRGNRLDIFWSDGKK-EYLSFFKNLTNLEQLDISS
XtTLR7        NQISTSTNR-----HLVSQSLRILEFKGNYLNILWKDGDT-RYLNFFKNLNKLYKLDISE
tetTLR7       NKISTSTNT-----ELESQSLERLEFRGNRLDVMWRDGDT-RYLNYFKKLSNLAILDISH
fTLR7         NKISTSTNT-----ELESQSLERLEFRGNRLDMLWRDGNT-RYLNYFKKLSNLAVLDISH
hTLR8         NNIYTLTDKY----NLESKSLVELVFSGNRLDILWNDDDN-RYISIFKGLKNLTRLDLSL
pigTLR8       NSIFTLTETY-----LKSTSLKELVFSGNRLDLLWNAQDD-RYWQIFKNLSTLTHLDLSS
mTLR8         NGIYTLTEES----ELKSISLKELVFSGNRLDHLWNANDG-KYWSIFKSLQNLIRLDLSY
MdTLR8        NDIFTLTEHQ-----LESDSLEELVFKGNRLDIMWMEEDN-RYIKIFTNLSNLTRLDLSF
XtTLR8        NKISTLTDFR-----LTSHSLKELQFSGNRLDVLWKNEDK-RYHKLFMNLSSLTCLDISY
tetTLR8       NGIYTLTTKH-----MESKSLAELRFSHNNLGILWKEKDD-SYRTLFTNLTNLTILDISF
fTLR8         NDISTLTTKY-----MESKSLAELRFTHNYLGTLWKENDL-SYKKLFTKLTNLTILDISF
hTLR9         NNIHSQVSQ-----QLCSTSLRALDFSGNALGHMWAEGD--LYLHFFQGLSGLIWLDLSQ
pigTLR9       NDIHSRVSQ-----QLCSASLCALDFSGNDLSRMWAEGD--LYLRFFQGLRSLVWLDLSQ
mTLR9         NDIHTRVSS-----HLNSNSVRFLDFSGNGMGRMWDEGG--LYLHFFQGLSGLLKDLSQ
ratTLR9       NDIHSRVSS-----RLYSTSVEYLDFSGNGVGRMWDEED--LYLYFFQDLRSLIHLDLSQ
MdTLR9        NQINTRISH-----SLSSPSLIALDFSGNELSRMWAEGD--LYLRFFQNLRTLVRLDLSQ
fTLR9         NAIAMRIDQ-----RLVSASLKQLSFNGNDLNTMWSSENN-QYVNFFHNLTSLTYLDISD
tetTLR9       NAIAARIDQ-----RLVSDSLKQLYFSGNDLNLMWSSENN-QYLNFFQNLTNLTYLDISD
XtTLR9        NFIGLRITR-----ELKSHSLETLRFRNNELGSSWQYGKD-TYLNMFTNLRSLKILDISY
mTLR3         NNIANINEDL----LEGLENLEILDFQHNNLARLWKRANPGGPVNFLKGLSHLHILNLES
hTLR3         NNIANINDDM----LEGLEKLEILDLQHNNLARLWKHANPGGPIYFLKGLSHLHILNLES
MdTLR3        NNIANINAEM----LEGLDKLEILDLQHNNLARLWKHANPGGPVHFLKGLSHLRVLNLES
chTLR3        NNIANIREDL----FNGLHELDILNLQHNNLARLWKCANPGGPVLFLKDVPNLHILNLKS
XtTLR3        NNIANIQEDV----FESLSNLRILSFEHNNLARLWKEANPGGPVLFLKGLKNLEKLSLLS
fTLR3         NNIANIRRTL----LKGLVNLRVLKLQHNNFARLWKNNNVGGPVMFLQDTLKLKTLLMDS
tetTLR3       NNIANIRRTL----LKGLGRLKVLKLQHNNFARLWKNANPGGPVMFLQDAVKLRTLLMDS
zebTLR3       NNIANINGDL----LEGLYNLKVVKMQHNNLARLWKMANPGGPVLFLKDATNLSYLNLDY
cfishTLR3     NNIANIKNGL----LGLHHLSVLKLQHNNLARVWKNANPGGPVLILRDAQNLTVLELDY
hTLR5         NRFSSCSGDQ---TPSENPSLEQLFLGENMLQLAWETELC---WDVFEGLSHLQVLYLNH
mTLR5         NRLSSCKAAH---TPSENPSLEQLFLTENMLQLAWETGLC---WDVFQGLSRLQILYLSN
MdTLR5        NRFSFCNQQY---GPSKNHTLEQLYLSENMLQLIWEAGKC---WDVFKRLSHLKILFLNN
XlTLR5        NRLSVCYPHF---NISKNNSLLHLDLSDNMISLIWDNGQC---GNIFSNLSLLGVLKLNN
XtTLR5        NRLSVCYSHF---SISKNNSLLHLDLSDNMINLIWDNGQC---LNVFSNLSLLGLLKLNN
fTLR5         NLIKWCTLNRKW-AVPINGTLKVLDVHDSSLQKVWMEGKC---LDLFDHLCNLRGLNLSF
tetTLR5       NFIKWCQLNGEP-PIPPNSSLKLDHDSSLQTIWSRGQC---LLDFHHLNHLQGLNLSF
troutTLR5     NFIKWCTLNNNI-SVPAVNSLKLLELRNIALQMIWARGEC---MHVFQHLGKLLSLDLSF
mTLR13        R---HGIQVVPSNFFQGLGSLQELLLGKNPSVFLD--------HHQFDPLINLTKLDISG
ratTLR13      K---HGIQVVPRNFFQGLSSLQELLLGKNPSVFLD--------HHQFDPLINLTKLDISG
MdTLR13       I---NGIQVVPINFFQGLGSLQELLLGKNSKVFLD--------HLQLDQLPNLTRLDISG
XtTLR13       A---EGNIYIPASLFQGLQSLKVLRLQGNPSAFFR--------NVSFEFLLNLTELDISA
chTLR21       QP--YGLKMLPHYFFQGLVRLQQLSLSQNMLRSIP--------PDVFEDLGQLRSLALAD
XtTLR21       QP--YGLKFLKSLKALYLAQNRISSLS--------SDAFNELGQLTYLSLAE
fTLR21        KP--YGLHILPRTLFRGLYSLRSLYVKNNMISYLA--------ADVFRDLKHLNFLSLDN
fTLR23        GFHYGFPLDVPLSMLSSMTQLEEFTADNIYLSAPD--------PETFRSNSRLRSLKISQ
tetTLR23      GFHYGFPLDVPLDMLRSMRNLEEFTAVNIYVSAPG--------PDTFGSNRRLRSLRISQ
fTLR22        --RRRGRSQLPSNILKGLSNLLEFTCRNSQLVWLP--------VDTFSYTPRLQRLDISS
tetTLR22      ---------------------FNCRNSQLLSLS--------KNMFTYTPRLQRLDISS
halTLR22      --HGKGKSQLPRNLLEGLTNLLVFNIRNIQLASLH--------KDMFNGTPQLTTLDISS
troutTLR22    --RHKGLCHLPINFLEGLTSLLSFQAGSLNIKDLH--------PDTFIHTPQLWFLDMSK
XtTLR22       --GHNGMQNLPINFFEGLLALERIHAGNLALSSID--------SRTFSYTPQLRELDISE
mTLR12        ---AFCSQGTSNLFLWQLPKLQSLRVWGAGNSSRP--------CLITG-LPSLRELKLAS
mTLR11        ---IFSTSQLQRFFPQQLPLLEHFFIWCENSYAVD--------LYLFG-MPRLRVLELGY
hTLR4         THTRVAFN----GIFNGLSSLEVLKMAGNSFQENF-------LPDIFTELRNLTFLDLSQ
rabbitTLR4    THIRVAFR----GIFDGLYSLRVLKMAGNAFQDNR-------LLNIFTEMTSLTTLDLSS
pigTLR4       TNIHVVFR----GIFAGLVSLQTLKMAGNSFQNNL-------LPDVFTDLTNLILLDLSK
mTLR4         TNTKIDFD----GIFLGLTSLNTLKMAGNSFKDNT-------LSNVFANTTNLTFLDLSK
MdTLR4        TNTHVKFK----NIFTGMSNLKHLKMAGSSFQDNI-------LHDIFKNLTKLVSLNISY
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chTLR4        TKTHVMSH----LIFHGLNSLQVLKMAGNSFENNT-------LTNNFENVRRLRILDISS
XtTLR4        TYCHFPID----CSFCGLYRLEELRVSRSTFAGDI-------LSVVFQNLTKLLSLHLSE
zebTLR4       TRVHFNTL-----TFQDLHNLTVLKMAGNSFSGDK-------LSYFLQNLTSLEVLDISQ
hTLR2         NSFHSMP-----ETCQWPEKMKYLNLSS-TRIHSV-------TGCIP---KTLEILDVSN
rabbitTLR2    NTFHAMP-----DTCQWPERLRRLNLSS-TRIHSL-------TYCIP---QTLEILDVSN
pigTLR2       NNFDSMP-----ETCQWPEKMKYLNLSS-TRIHSL-------THCLP---QTLEVLDISN
mTLR2         NTFHPMP-----DSCQWPEKMRFLNLSS-TGIRVV-------KTCIP---QTLEVLDVSN
MdTLR2        NNLDSMP-----DSCQWPGKLKYLNISS-TKTYTV-------TSCIP---QTLEILDISN
chTLR2        NNFGEIP-----DMCEWPENLKYLNLSS-TQIPKL-------TTCIP---STLEVLDVSA
XtTLR2        NNFGELS----TSTCQWPKSLKYLNISS-SQMSNI--------TCIP---PTLQILDVSS
fTLR2         NGYSSMP-----LGCSWPSSLRYLNMSG-TRIASI-------SPCLP---AALEVLDLSN
halTLR2       NFYSSMP-----GSCSWPSTLRYLNISG-AKLTTI-------TPCLP---KTLEVLDLSN
zebTLR2       NSFVSMP-----EKCSWPVTLRFLNLSS-TKLSTL-------TPCLP---SSLTVLDLSE
hTLR1         NSVSYDEKK---GDCSWTKSLLSLNMSSNILTDTI-------FRCLP---PRIKVLDLHS
mTLR1         NSLRYSDGG---IPCAWTQSLLVLNLSSNMLTGSV-------FRCLP---PKVKVLDLHS
hTLR6         NSLESGRHK---ENCTWVESIVVLNLSSNMLTDSV-------FRCLP---PRIKVLDLHS
pigTLR6       NSLEYDRHG---ENCTWVGSIVVLNLSSNILTDSV-------FRCLP---PRIKVLDLHS
mTLR6         NSLNSHAYD---RTCAWAESILVLNLSSNMLTGSV-------FRCLP---PKVKVLDLHN
MdTLR1L       NSISYDEEK---KNCSWSESLLVLNLSSNELTESV-------FRCLP---PSITVLDLYR
hTLR10        NLLQHKNDE----NCSWPETVVNMNLSYNKLSDSV-------FRCLP---KSIQILDLNN
ratTLR10      NLLQHGNGE----KCMWPDTLILLNLSSNKFDGSV-------FRCLP---KSIQTLDLNN
MdTLR10       NLLQHTDGN----HCHWPETLTTMNLSSNKFIDSI-------FKCIP---KSIQVLDLHN
chTLR1L1      NLLRNSRAEG---RCQWADSLAELDLSSNQLTEAV-------FECLP---ANINKVDLQN
XtTLR1L3      NGLHIDNEK----QCNWMDSLVFLNLSESGLTNSV-------FGCLP---INLQILDLSK
XtTLR1L1      NGLHIDNEK----QCKWMDSLVFLNLSESGLTNSV-------FGCLP---INLQILDLSK
XtTLR1L2      NLLAYD-EE----DCHWSQNIVELNLASNFLTASI-------FKCLP---ISIKILILES
fTLR1         NLLVYDGQK----GCVWPQNISSMSLSSNGLTDSV-------FQCLP---ENVERLDLQN
tetTLR1       NRLVYDGQG----ECYWPQNISILHLSSNSLTSSA-------FQCLP---TGVERLDLQN
tetTLR14      NKLGSAAKSL---NCVWQKSITRFIVHHNNFESSA-------LHCLP---TSVEFLDLSF
fTLR14        NKLGSAAESR---NCIWQKSITRFIVHHNNFESSA-------LHCLP---TSVEFLDLSF
XtTLR14       NYLGALDE-----VCTWTPQITKLILKDNTLKVGV-------FKCLP---VTVEHLDMSN
XtTLR14L1     NSLGSNDE-----MCTWTPSIRTVILKDNMLKVGV-------FQCLP---TTVEFLDLSH
XtTLR14L2     NDLGVYNE-----VCTWIPNITTLILKGNTLKMCV-------FQCLP---TSVELLDLSY
XtTLR14L3     NYIGSEDE-----NCSWTPNITTFILKNNLLTPGV-------FTCLP---TTVRYLDLSN
XtTLR16       NGLISCSHYG--YQLEHFENLENIQYHFSGAPLTR--------NVNFSNIANLRSLEVEN
chTLR15       FPSTLTTCDIS----KNKLKVLSLTKALENLESLNVSGNLITRLEPACQLPSLTNLDSSH
                                     .                          :  :


MdTLR7        NSLS------FLPTGVFEGLPPNLKTLLLSKNQIKSFNWNKLSCLQNLETLDLSHNLL--
hTLR7         NSLS------FLPSGVFDGMPPNLKNLSLAKNGLKSFSWKKLQCLKNLETLDLSHNQL--
chTLR7        NMLN------FLPPDVFEAMPPELKILNLTSNRLHTFNWGKLHLLTKLITLDLSNNLL--
XtTLR7        NSLT------FVPPGVFEGMPPDLLELYLARNKLKTFSWDKLHLLEKLSVLDLSNNYL--
tetTLR7       NNLN------SIQRQVFSGLPDTLSELYMTNNKLKSFAWEELYLRSLLVLDLSENYL--
fTLR7         NNLN------SIQQQVFSGLPDTLSELYVNNNKLKSFAWGELSLLPSLLVLDLSGNYL--
hTLR8         NRLK------HIPNEAFLNLPASLTELHINDNMLKFFNWTLLQQFPRLELLDLRGNKL--
pigTLR8       NNLQ------HIPSEAFLNLPQTLTELYISDNRLNFFNWSLLQQFPNLTLLDLSGNEL--
mTLR8         NNLQ------QIPNGAFLNLPQSLQELLISGNKLRFFNWTLLQYFPHLHLLDLSRNEL--
MdTLR8        NRLH------TIPTEAFHNLPQSLVELRLNNNHLRVFNWTSLQYFHNLTLLDLRCNSL--
XtTLR8        NRLS------KIK-GELRYLPLSLTELYLNNNELVYFGWEELQAYENLKYLDLSHNKL--
tetTLR8       NKIA------KLPNDIYKYLPSNLTTLSISHNFLTDFKWEELRCLPRIQILDLSFN----
fTLR8         NQII------KIPDEMYKHLPQNLTTLIISHNFLTDFKWNKLIFLPQIKVLDLSFN----
hTLR9         NRLH------TLLPQTLRNLPKSLQVLRLRDNYLAFFKWWSLHFLPKLEVLDLAGNQL--
pigTLR9       NHLH------TLLPRALDNLPKSLKHLHLRDNNLAFFNWSSLTLLPKLETLDLAGNQL--
mTLR9         NNLH------ILRPQNLDNLPKSLKLLSLRDNYLSFFNWTSLSFLPNLEVLDLAGNQL--
ratTLR9       NKLH------ILRPQNLNYLPKSLTKLSFRDNHLSFFNWSSLAFLPNLRDLDLAGNLL--
MdTLR9        NKLR------SLPAQALDNLPKSLRLLWAKDNHITFFNWSSLSSLPHLEVLDLSRNLLGH
fTLR9         NKLR------LVSPEVLCNLPKSLQNLSLSNNRLNYFPWENISVLSNLRHLDLSQNFI--
tetTLR9       NKIR------LVSPKVLCNLPTSLQNLSLSNNRLTYFPWENISALTNLHHLDLSQNFI--
XtTLR9        NQLP------VIPNEVLEKLPESLQKLNLSHNKLYTFNWAKTAHLGNLAILDLGFNAL--
mTLR3         NGLD------EIPVGVFKNL----------------------------------------
hTLR3         NGFD------EIPVEVFKDL----------------------------------------
MdTLR3        NGFD------EIPSDVFKGL----------------------------------------
chTLR3        NGFD------EIPVHVFKGL----------------------------------------
XtTLR3        NGFD------EIPANAFKGL----------------------------------------
fTLR3         NGLD------EIPAGALRGLR---------------------------------------
tetTLR3       NGLD------EIPAEALRGLT---------------------------------------
zebTLR3       NGID------EIPPNAFRGFS---------------------------------------
cfishTLR3     NGLD------EIPMKAFQGLS---------------------------------------
hTLR5         NYLN------SLPPGVFSHL----------------------------------------
mTLR5         NYLN------FLPPGIFNDL----------------------------------------
MdTLR5        NYLN------FLPPDVFSDL----------------------------------------
XlTLR5        NLLR------YLPNGIFNGL----------------------------------------
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XtTLR5        NFLR------YLPDGIFNGL----------------------------------------
fTLR5         NSLE------SLPQGIFAGL----------------------------------------
tetTLR5       NFLE------KLPLGVFSGL----------------------------------------
troutTLR5     NSLQ------APPDGIFKGL----------------------------------------
mTLR13        TKD--GDRSLYLNASLFQNLK---------------------------------------
ratTLR13      TKD--GDRSLYLNSSLFQNLK---------------------------------------
MdTLR13       TKA--GNRGLYLNISLFQKLK---------------------------------------
XtTLR13       TVYTMTDPPISFEKELFKKLG---------------------------------------
chTLR21       SSN----GLHDLPDGIFRNLG---------------------------------------
XtTLR21       DCN----GIQRLPPGIFKNLK---------------------------------------
fTLR21        CCV----GPTHLPAGIFKDLT---------------------------------------
fTLR23        TDLS------DLDPEMFRPIP---------------------------------------
tetTLR23      ADLS------DLDPEMFRPTA---------------------------------------
fTLR22        NEFQ------DLSPALFHPIK---------------------------------------
tetTLR22      NDFT------DLPPDLFHPIP---------------------------------------
halTLR22      NELM------DLSPDLFSPIP---------------------------------------
troutTLR22    NEFT------ALTPKLFHPTP---------------------------------------
XtTLR22       NPIK------ILDPFLFRNVP---------------------------------------
mTLR12        LQSITQ-PRSVQLEELVGDLP---------------------------------------
mTLR11        LNFFYE-SSTMKLEMLLKEVP---------------------------------------
hTLR4         CQLE------QLSPTAFNSLSS---------------------------------------
rabbitTLR4    CQLE------QVYQGAFESLPR---------------------------------------
pigTLR4       CQLE------QVSQRAFHSLPR---------------------------------------
mTLR4         CQLE------QISWGVFDTLHR---------------------------------------
MdTLR4        CQLE------RVSQETMSPLHQ---------------------------------------
chTLR4        CKLV------WVDQSTFNALSE---------------------------------------
XtTLR4        CSLE------FIPKGTFLSLKV---------------------------------------
zebTLR4       CGIE------KVSMRSFTGTQK---------------------------------------
hTLR2         NNLN------LFS----LNLPQ---------------------------------------
rabbitTLR2    NNLN------VFS----LTLPR---------------------------------------
pigTLR2       NNLN------SFS----LSLPQ---------------------------------------
mTLR2         NNLD------SFS----LFLPR---------------------------------------
MdTLR2        NQLS------DFN----LNLPH---------------------------------------
chTLR2        NNLQ------DFG----LQLPF---------------------------------------
XtTLR2        NYLT------VFT----IKMPN---------------------------------------
fTLR2         NDLK------DFV----LVLPT---------------------------------------
halTLR2       NDLQ------GVT----VALPA---------------------------------------
zebTLR2       NDLK------AFK----QRFPH---------------------------------------
hTLR1         NKIK------SIPK-QVVKLEA---------------------------------------
mTLR1         NRIM------SIPK-DVTHLQA---------------------------------------
hTLR6         NKIK------SVPK-QVVKLEA---------------------------------------
pigTLR6       NRIR------SIPK-DVAHLEA---------------------------------------
mTLR6         NRIM------SIPK-DVTHLQA---------------------------------------
MdTLR1L       NKIK------SIPK-NISNLES---------------------------------------
hTLR10        NQIQ------TVPK-ETIHLMA---------------------------------------
ratTLR10      NKIR------AVPK-EIIYLKS---------------------------------------
MdTLR10       NDIR------TIPR-EIENLKA---------------------------------------
chTLR1L1      NQIA------NVPK-GITELHS---------------------------------------
XtTLR1L3      NQIS------SIPI-EVKNFVS---------------------------------------
XtTLR1L1      NQIS------SIPI-EVKNFVS---------------------------------------
XtTLR1L2      NDIT------HVPS-GVTHLDD---------------------------------------
fTLR1         NQIS------AVSS-STLGLVR---------------------------------------
tetTLR1       NQLS------VVSS-STLKLKR---------------------------------------
tetTLR14      CELD------QLDMQYFSKTSQ---------------------------------------
fTLR14        CDLD------QLDMNYFSKTSN---------------------------------------
XtTLR14       SLLE------RLDMDYFNRATK---------------------------------------
XtTLR14L1     SQLE------QLDMDYFNKATN---------------------------------------
XtTLR14L2     SQLE------QLDLNYFNRATN---------------------------------------
XtTLR14L3     SRLE------SLDMDYFSNATN---------------------------------------
XtTLR16       LATALDPN--VPPNDLFHKLHK---------------------------------------
chTLR15       NLIS------ELPDHLGQSLLM---------------------------------------


MdTLR7        -SRVPEVLSNCSRSLKKLILSYNQIHQLTKNFLQDAFQLRYLDLSSNKLRVIQKSSFPEN
hTLR7         -TTVPERLSNCSRSLKNLILKNNQIRSLTKYFLQDAFQLRYLDLSSNKIQMIQKTSFPEN
chTLR7        -TTVPRKLSNCTSTLQELILRNNRITRITKYFLRGAIQLTYLDLSSNKIQIIKKSSFPEN
XtTLR7        -TTVPRELSNCTSSIKKLILSNNKIKKLTPFFLRGSVSLKYLDLSDNLIQNIGHSSFPED
tetTLR7       -TTVPRILSNCSKSLNKLILHKNQILKLTPNFLEYAYNLKYLDLSFNHIEQIEKSNFPDD
fTLR7         -TTVPHMLSNCSKSLKKLILHKNEILKLTPDFLKYAYNLKYLDLSFNRIGQIEKSNFPDD
hTLR8         -LFLTDSLSDFTSSLRTLLLSHNRISHLPSGFLSEVSSLKHLDLSSNLLKTINKSALETK
pigTLR8       -SFLTDSLSKFTTSLQTLILRQNRISYLPSGLLSEASSLTHLDLSSNQLKMVNISKLHAK
mTLR8         -YFLPNCLSKFAHSLETLLLSHNHFSHLPSGFLSEARNLVHLDLSFNTIKMINKSSLQTK
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MdTLR8       -FTIKPDL--YESSVQTLLLGKNIISHLPDGLFSKAKNLYHLDLSYNLIKMVNKSTFHMK
XtTLR8       -TMIMGNLSIHTYSLSSLIISYNSISSLPVAFLHKARNLSELDLSFNHLKSINSSVLLSG
tetTLR8      -YLTNVT--DVAPTLTFLDLTHNRIFHLNDGFLKGAKRLRALSLKANQLTTINASTFQPR
fTLR8        -RLTNVTGIHIAHTLTLLNLKHNGISHLDDGFLMGAKRLQVLNLKSNQLTTINESTFQPR
hTLR9        -KALTNGSLPAGTRLRRLDVSCNSISFVAPGFFSKAKELRELNLSANALKTVDHSWFGP-
pigTLR9      -KALSNGSLPSGTQLRRLDLSGNSIGFVNPGFFALAKQLEELNLSANALKTVEPSWFGS-
mTLR9        -KALTNGTLPNGTLLQKLDVSSNSIVSVVPAFFALAVELKEVNLSHNILKTVDRSWFGP-
ratTLR9      -KALTNGTLPNGTLLQKLDVSSNSIVFVVPAFFALAVELKEVNLSHNILKTVDRSWFGP-
MdTLR9       TSSLATGRLPNGSRLHTLRLSRNSIRFIALGFFALATELKVVDLSGNALKTVVRGWFGG-
fTLR9        -SFLPYTVVHAAEPLSLLDLSHNRIGYVPRSFFLAMNSLQRLYLSHNQLKQLNQHFLPAP
tetTLR9      -TFLPHIVIQAPASFLLLDLSHNRINYLPQSFFRAMNSLRRLYLSHNQLKQFDHQL--AL
XtTLR9       -TKLRANLTES--NIAFLNLTYNKINSLDKDFFDSFSELKQLILSNNLIKTIHITSFPIN
mTLR3        ------------FELKSINLGLNNLNKLEPFIFDDQTSLRSLNLQKNLITSVEKDVFGP-
hTLR3        ------------FELKIIDLGLNNLNTLPASVFNNQVSLKSLNLQKNLITSVEKKVFGP-
MdTLR3       ------------FQLRAIYLGLNNLNLLPASLFDHQTSLKSLSLQKNLITSVEKGVFGP-
chTLR3       ------------HQLKDLDLGSNNLNLLPATLFDDQTSLNTLNLQKNLITSVEENVFGP-
XtTLR3       ------------CKLKVLDIGENNVYILPPSVFDDQHSLTLLDLHKNLITSVEQDLFKN-
fTLR3        -------------ELQELSLGNNLLNSLRPSVFDDLISLRALFLQKNVITSVRPEVFET-
tetTLR3      -------------ELQELSLGSNLLNSLRDSVFNDLTSLQALYLEKNMITTVRPEVFKT-
zebTLR3      -------------ELHELSLRGNLLDQLHASVFDDLNSLKYLHLQKNLITSVQRATFGV-
cfishTLR3    -------------KLKYLSISGNLLNFLHDSIFDNLRSLRFLRLQKNLLTSVRRETFGV-
hTLR5        ------------TALRGLSLNSNRLTVLSHNDLPAN--LEILDISRNQLLAPNPDVFVS-
mTLR5        ------------VALRMLSLSANKLTVLSPGSLPAN--LEILDISRNQLLCPDDPALFSS-
MdTLR5       ------------TALQILSLDGNKLISLSPGVLPEN--LRVLSLSQNHLLSPDPTVFAS-
XlTLR5       ------------DSLQTLNLSSNLLTYLIPGIFPTN--LDTVDLSKNQLYSPNPKLFLS-
XtTLR5       ------------ESLQTLNLSSNLLTHLMPGVFPTN--LDTVDLSKNQLYSPSPKVFLS-
fTLR5        ------------SSVHEIDLSFNALTYLQSDVFPTS--LAILHILGNFLASPDPGIFQT-
tetTLR5      ------------SSIQEIDLSFNALTYLPSDGFPAS--LSILHIAGNFLASPEPGILRS-
troutTLR5    ------------ISLEEMDLHFNSLTYLKQDIFPES--LKTVDLSYNFLASPDPEAFHS-
mTLR13       -------------RLKILRLENNNLESLVPDMFSSLQSLQVFSLRFNNLKVINQSHLKNL
ratTLR13     -------------RLKVLRLENNNLESLVPGMFSSLQNLQVFSLRFNNLKVINQSHLENL
MdTLR13      -------------QLKSLQLENNNLDSLAPEMFFGLEGLQIFSLRFNNLKIINQNLLQNL
XtTLR13      -------------QLRNLTLDNNGIQFLPEDVFTNVPMLEHISLRYNRLTNISEDILKNV
chTLR21      -------------NLRFLDLENAGLHSLTLEVFGNLSRLQVLHLARNELKTFNDSVASRL
XtTLR21      -------------NLQILDLENICLQYMRMEVFSSLTNLKRLLLTKNALTHINIKVFENM
fTLR21       -------------NLTILTVENMGIQNLSTEVFGNISQLKKIQLNHNVMQTFPVTVLQSL
fTLR23       -------------DLQSLDLSGTQISSLEFLLQVDFSSLRDLRLCDNDITSINHTLFQFL
tetTLR23     -------------ELQSLDLSDTRISSLEFLLRVNLSSLRNLTLRDNALVVVNHTFFRFL
fTLR22       -------------DVRSLYISRTRLGSLEFLKDARLGKLNFLQSKRNVFSVISEDVLESL
tetTLR22     -------------QVRSLYISRISLRSLDFIKKAKLDQLEFLQARRNVFSVVSEDVVEAL
halTLR22     -------------NLKSLYVSRTNLRSLDYLTGANLTKLEFLQARKNEFSIISEEIIKSV
troutTLR22   -------------SLNRLYLPKARLQSLDFLKGANLSRVTFLQVRKNDITAVNETVLQSL
XtTLR22      -------------HLTELHISKTRMESLDFLILSNLTHLKLLRAVDSQLNSFTSQQGAAL
mTLR12       -------------QLQALVLSSTGLKSLSAAAFQRLHSLQVLVLEYEKDLMLQDSLREYS
mTLR11       -------------QLQVLALSHLNLRNLSVSSFKSLQDLKLLLFNSERALEMNSNLQEFI
hTLR4        -------------LQVLNMSHNNFFSLDTFPYKCLNSLQVLDYSLNHIMTSKKQELQHF
rabbitTLR4   -------------LESLNMSHNNLLVLDTLTYKCLYSLQVLDLSFNHIGNITEPGQQHF
pigTLR4      -------------LQVLNMSHNRLLFLDTLPYKPLHSLRILDCSYNLIVASKEQELQHL
mTLR4        -------------LQLLNMSHNNLLFLDSSHYNQLYSLSTLDCSFNRIETSKG-ILQHF
MdTLR4       -------------LQVLDLISHNKLQTFDPFICMPLLNLQVLNCSSNSITALNGENLQEL
chTLR4       -------------LKELIISNNKLLTFDPVTYKPLQALTALDFSNNQMSFLSDSALEIL
XtTLR4       -------------LNVLNLSKNKLLDLQTSMLIPLSNLISLDLNFNQFKVISDNSIRSL
zebTLR4      -------------LRHLYLSRNKLMVLDFLTQPELTHLTSVYIDKNSITTIPLDVLQKL
hTLR2        -------------LKELYISRNKLMTLP--DASLLPMLLVLKISRNAITTFSKEQLDSF
rabbitTLR2   -------------LKELYISRNMLKTLP--GASLLPMLLVMKISRNSINTFSKEQLESF
pigTLR2      -------------LKELYISRNKLKTLP--DASFLPMLSVLRISRNTINTFSKEQLDSF
mTLR2        -------------LQELYARNKLKTLP--DASLFPVLLVMKIRENAVSTFSKDQLGSF
MdTLR2       -------------LKELYLSKNKLKTLP--DAAHFPHLVVMNISQNTLYTFSKAQLESF
chTLR2       -------------LKELYLTKNHLKTLP--EATDIPNLVAMSISRNKLNSFSKEEFESF
XtTLR2       -------------LTELYISNNRLSKLP--EGMYFPRLFMLSIDRNKLNDFYQSDLDLF
fTLR2        -------------LRELHLSGNKLLRLP--PGWFFPNLNTLTIQSNSLSMFGPSELRTY
halTLR2      -------------LRELRLSGNKLLRLP--PGSWFPNLQTLTVQSNTLNMFDRSDLRSF
zebTLR2      -------------LTTLILTGNRLMKLP--DGKLFPSLNTLLIQRNALRMFNQSSLRSF
hTLR1        -------------LQELNVAFNSLTDLP-GCGSFSS-LSVLIIDHNSVSHPSADFFQSC
mTLR1        -------------LQELNVAFNSLTDLP-GCGAFSS-LSVLVIDHNSVSHPSEDFFQSC
hTLR6        -------------LQELNVAFNSLTDLP-GCGSFSS-LSVLIIDHNSVSHPSADFFQSC
pigTLR6      -------------LQELNVASNSLAHLP-GCGSFSS-LSILSIDYNSISNPSADFFQSC
mTLR6        -------------LQELNVASNSLTDLP-GCGAFSS-LSVLVIDHNSVSHPSEDFFQSC
MdTLR1L      -------------LQELNIAFNFLVDLP-GCSTFSS-LSVLIIQHNSVSHPSAHFFNSC
hTLR10       -------------LRELNIAFNFLTDLP-GCSHFSR-LSVLNIEMNFILSPSLDFVQSC
ratTLR10     -------------LRELSIAFNFLTDLP-GCDHFKQ-LSSLNIEMNLILSPSLDFFQSC
MdTLR10      -------------LQELNIASNSLTDLP-GCRNFQR-LSALNVEMNSIISPSLDFFQSC
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chTLR1L1      --------------LQELNLASNRLADLP-GCRAFTG-LEILNIERNLILTPSADFFETC
XtTLR1L3      --------------LKELHLASNRLTDIP-DCHNIGNNLGVLKVDENFINLPSKEFLQNC
XtTLR1L1      --------------LKELHLASNRLTDIP-DCHNIGNNLGVLKVDENLINLPSKEFLQNC
XtTLR1L2      --------------LVELNLSFNRLGDLP-DCSNISS-LSLLGVEGNQILYPSIESIESC
fTLR1         --------------LWYLNLNANKLLDLP-VCHNFPL-LQELLLKSNSLHTPSVDRLKSC
tetTLR1       --------------LLSLNLNANRLLDLP-VCDNFPL-LQELLLRSNSLHAPSVDRLESC
tetTLR14      -------------LKELHLSGNKIKYIP--SKWESPSLWSLSLDGNSFGLISTESFQDM
fTLR14        -------------LQELHLSGNKIKFIP--SKWASPSLQSLSLDGNSFGLIGTESFQDM
XtTLR14       -------------LKVLILSQNKLKFIS--RDWKCPNLQVLGLEGNSFSVIDKGSFKDL
XtTLR14L1     -------------LKQLILSHNKIKFIS--SEWKSPNLQVLALEDNSFGVINVGSFKDL
XtTLR14L2     -------------LKELVLSHNKLNFIS--SDWRSPNLQVLHLEGNSISLIDKGTFKDL
XtTLR14L3     -------------LKTLVLSYNKLTSIS--SNWSNPFLQVLFLDNNIISIIDKGSFNNL
XtTLR16       -------------LEVLKLFNCGFKYMTTALLKDMRSLRVLVMKNQMILAVDPGLQNTL
chTLR15       -------------LKHFNLSGNKISFLQR--GSLPASLEELDISDNAITTIVQDTFGQL
                           .   : :    .    .            :   .        .

MdTLR7        VLNQ--LDVLLLHGNRFFCNCDAVWLVWWIN----QTEVTIP-YLATEVTCAGPGVHKGQ
hTLR7         VLNN--LKMLLLHHNRFLCTCDAVWFVWWVN----HTEVTIP-YLATDVTCVGPGAHKGQ
chTLR7        IINN--LRMLLLHNNPFKCNCDAVWFVGWIN----QTQVAIP-LLATDVTCAGPGAHKGR
XtTLR7        VLDN--LTELLLQGNPFKCNCNLVWLVSWIN----QTKVYIP-NLVTGVTCSGPGAHRGQ
tetTLR7       VVNG--MDVLLLHKNRFQCSCGAIWFIIWLN----QTKVTIP-RLATDVTCASPGAQRGH
fTLR7         VVNG--MDMLLLHKNRFQCSCSAIWFVMWLN----QTTVTIP-RLATDVTCASPGAQRGH
hTLR8         TTTK--LSMLELHGNPFECTCDIGDFRRWMDE---HLNVKIP-RLV-DVICASPGDQRGK
pigTLR8       TTTN--LAILKLDRNPFDCTCDIRDFRKWMDE---NLRVTIP-RLT-DVICASPGDQRGR
mTLR8         MKTN--LSILELHGNYFDCTCDISDFRSWLDE---NLNITIP-KLV-NVICSNPGDQKSK
MdTLR8        TSNN--LKILNLRGNPFDCVCEMGDFRKWIDE---NPNVTIP-RLV-DVICSTPGDQTGK
XtTLR8        SENY--LKVLGLKGNPFVCTCEITDFISWIYA---N-NVTIP-RLATDVNCATPENKKGS
tetTLR8       PKKQ--FQTLYLEQNPFQCTCDLLDFILWIET---S-DVKIP-RLATDVTCKTPANQKGH
fTLR8         PENQ--FQTLYLEENPFQCTCDLLDFILWIEN---S-DVKIP-GLATDVKCDAPANQKGR
hTLR9         LASA--LQILDVSANPLHCACGAA-FMDFLLE----VQAAVPG--LPSRVKCGSPGQLQGL
pigTLR9       MVGN--LKVLDVSANPLHCACGAT-FVGFLLE----VQAAVPG--LPSRVKCGSPGQLQGH
mTLR9         IVMN--LTVLDVRSNPLHCACGAA-FVDLLLE----VQTKVPG--LANGVKCGSPGQLQGR
ratTLR9       IVMN--LTVLDVSSNPLHCACGAP-FVDLLLE----VQTKVPG--LANGVKCGSPRQLQGR
MdTLR9        LGPS--LKKLDIRANPLSCGCDAT-FLDFLLE----IQRAVPG--LSTEVVCGSPSPLSGK
fTLR9         FKNGSGPRTLSLHVNPFKCDCDASWFADFLRN---TPIEIPH--LTTNVHCEYPESQRGK
tetTLR9       FKSTSALQMLSLHANPFNCDCSASRFVDFLRN---TLVDIPH--LTTEVNCEYPESQRGK
XtTLR9        FLQN--LDSLDVSGNPFQCTCKAYWFITFLME---TEVTVDH--LSTGMKCDSPDSLRGR
mTLR3         PFQN--LNSLDMRFNPFDCTCESISWFVNWIN---QTH-TNISELSTHYLCNTPHHYYGF
hTLR3         AFRN--LTELDMRFNPFDCTCESIAWFVNWIN---ETH-TNIPELSSHYLCNTPPHYHGF
MdTLR3        AFQN--LTLLDMSFNPFDCTCESIAWFVSWLN---KTH-THIEDLPSHYLCNTPPQYHGT
chTLR3        AFKS--LRTLEMDFNPFDCTCESIAWFASWLN---DTQ-AYIPGLQSQYICNTPPKYHGT
XtTLR3        VFSS--LKYLNMGGNPYDCTCESIAWFASWLN---TTN-TSVPLAHSQYICNTPARYHGN
fTLR3         PLSN--LSLLVMGKNPYDCTCESILWYATWLN---NTNTTSVPDLAEQYTCNTPLTYFNR
tetTLR3       PMSN--LGLLVMGDNPFDCTCESILWFVKWLN---STNTTSVPGLTEQYTCNTPLAYFNR
zebTLR3       PLSK--LKELYMDHNPFDCTCESILWFSEWLN---STN-TSVPGFPQSYICNTPNAYFNH
cfishTLR3     PLSN--LTELFMDHNPFDCTCESILWFNKWLN---TTN-TSVPDRAKSYVCNTPSMYFNR
hTLR5         ------LSVLDITHNKFICECELSTFINWLN----HTNVTIAGP-PADIYCVYPDSFSGV
mTLR5         ------LRVLDITHNEFVCNCELSTFISWLN----QTNVTLFGS-PADVYCMYPNSLLGG
MdTLR5        ------LSYLDITHNKYICECEARNFILWLN----QTKVNMLGS-PEDVYCTYPDSFSGV
XlTLR5        ------VKTLDLTDNHYICDCDLVYFLRWLN----ETNATLLGS-PNDIYCMYPTNLLYK
XtTLR5        ------VKKLDLTHNQYICDCFLLDFIMWLN----ETNATLLGS-PYDTYCMYPPNFLFQ
fTLR5         ------LILLDLEGNRFHCDCHLQAFLGWLN----ATNVTHLSP-VAEYRCAFPAALQNL
tetTLR5       ------LDYLDLEGNRFHCDCHLEAFLAWLN----VTRVTHLSP-VAKYACAFPAALQNL
troutTLR5     ------LSWINLYRNQFHCDCGLEDFLTRLK----GTNVTFPDPGVNEFSCEFPSDLHGI
mTLR13        KSL----MFFDVYGNKLQCTCDNLWFKNWSMN---TEEVHIP--FLRSYPCQQPGSQS--
ratTLR13      KSL----MFFDVYGNKLQCTCDNLWFKNWSMN---TEEVHIP--FLRSYPCQQPNSQS--
MdTLR13       KSL----MYFDVYGNKLQCTCDNGWFKNWSVS---TPTVHIP--YLGSFQCQQPNTQS--
XtTLR13       PNL----NYFDMYMNTLSCSCDNYWFQNWSKC---NTEVQIP--FIQSYKCFGLEANE--
chTLR21       SSL----RYLDLRKCPLSCTCDNMWLQGWLNN---S-RVQVV--YPYNYTCG-SQHNA--
XtTLR21       TQL----KYLDLRKCPLSCTCNNAELQMWFKK---G-PVQIV--LPYNLTCP-ANENS--
fTLR21        TKL----QYLDIRNVPLSCTCENSLLRNWTVN---NQKVQMI--YLYSLPCP-HDPKV--
fTLR23        PSL----TLLDLTNNPLTCDCLNAGFILWVMD---NNQTQVI--NGHQYSCSFPVAKKGT
tetTLR23      PAL----SLLDLTNNPLACECVNAGFIVWARS---SLRTQVL--NGHQYSCSFPLAQRGT
fTLR22        PEL----VYVDFQGNFTCDCDNAGFLQWVKE---NNKTQVF--DAYNFECNYPLELKSK
tetTLR22      PEL----AYVDFQGNSFTCSCDNAWFLQWAQK---NNHTQVF--DAYNFECNYPRKEKGK
halTLR22      PSL----VYADFQGNSFTCKCDNAWFIKWVEY---YNQTQVF--DAYNFECNYPLNLKGT
troutTLR22    PAL----TYLDMQDNPFTCGCSDAWFVQWMES---NNQTQVV--GAGEFTCNYPADLKDT
XtTLR22       PSL----RFLDLRNNPLTCICDNQWFIDWVHN---DTKTQVL--HFYEYTCAYPPVARNS
mTLR12        PQMP---HYIYILESNLACHCANAWMEPWVKR---STKTYIY--IRDNRLCPGQDRLSAR
mTLR11        PQMP---QYVYFSDVTFTCQCEASWLESWATR---APNTFVY--GLEKSICIANASDYSK
hTLR4         PSS---LAFLNLTQNDFACTCEHQSFLQWIKD---QRQLLVE---VERMECATPSDKQG-
rabbitTLR4    PSN---LTLLHLTKNAFVCDCEHQIFMQWIKD---QRRLLVE---VEQMVCITPPN----
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pigTLR4      PRS---LAFLNLTKNDFSCACEHQTFLQWVKD---QKQLLVG---AEQMVCTQPLEMQD-
mTLR4        PKS---LAFFNLTNNSVACICEHQKFLQWVKD---QKQFLVN---VEQMTCATPVEMNT-
MdTLR4       SRT---LISIDLSDNPFDCVCDHQIFFQWVKE---HTHLLNR---SKPMTCQTPSHMKD-
chTLR4       PDS---LVLLDISHNLFECSCTHLNFLKWVKE---KQDLLRN---KHSMICHTPAYMKN-
XtTLR4       PSS---LAKVDLSGNPFDCSCWQIIFLLWVQQ---QKDKLLK--QSYQMFCKTPNTLNG-
zebTLR4      PMN---LSEFDLSSNSIDCSCSQTDFILWIIQ---KQNILKQ---LENIRCKTFSANTD-
hTLR2        HT----LKTLEAGGNNFICSCEFLSFTQEQ----QAL-AKVLIDWPANYLCDSPSHVRGQ
rabbitTLR2   QK----VTALEAGGNNFICSCDFLSLTQEQ----PAL-TRVLPDWPESYLCDSPSHVRGQ
pigTLR2      QK----LKTLEAGGNNFICSCDFLSFTQGQ----QAL-AQVLSDWPENYLCDSPSHVRGQ
mTLR2        PK----LETLEAGDNHFVCSCELLSFTMET----PAL-AQILVDWPDSYLCDSPPRLHGH
MdTLR2       QT----TEILAAGGNNFICSCEFLSFVHHEQ---TLL-VKVLTDWPGGYLCDAPFQVRGQ
chTLR2       KQ----MELLDASANNFICSCEFLSFIHHE----AGI-AQVLVGWPESYICDSPLTVRGA
XtTLR2       PQ----LTTLDGRDNNYLCSCQFLSFMHSH--------TIALVGWPDDYICDSPSSVRGK
fTLR2        SR----LQSLQAGWNKFVCTCDFVGLFQSGV---KVG-SVQLTDREDDYICDAPLRLQGA
halTLR2      PR----LQNLQAGQNKFVCTCDFVAFLQSSI---RGDEDVRLTDGEESYICDSPFHLQGE
zebTLR2      KT----LLYLEAGANNFVCSCKFVSFFKKDV---EDL--ITLQDGRQNYVCNTPFTLRGN
hTLR1        QK----MRSIKAGDNPFQCTCELGEFVKN----IDQVSSEVLEGWPDSYKCDYPESYRGT
mTLR1        QN----IRSLTAGNNPFQCTCELRDFVKN----IGWVAREVVEGWPDSYRCDYPESSRGT
hTLR6        QK----MRSIKAGDNPFQCTCELREFVKN----IDQVSSEVLEGWPDSYKCDYPESYRGS
pigTLR6      QK----IRSLKAGNNPFQCTCELRDFIQS----LGQVSSDVVESWPDSYECEYPESYKGT
mTLR6        QN----IRSLTAGNNPFQCTCELRDFVKN----IGWVAREVVEGWPDSYRCDYPESSKGT
MdTLR1L      QN----IKSLQAGDNPFLCTCELREFSKN----MATLSSQVVSGWPHSYKCAFPDNYKGT
hTLR10       QE----VKTLNAGRNPFRCTCELKNFIQ-----LETYSEVMMVGWSDSYTCEYPLNLRGT
ratTLR10     QE----VKTLNAGRNPFRCICEFRDFIW-----LEKHSKGLMSGWPDSYACEYPLSLKGT
MdTLR10      QE----VQSLKAGDNPFRCNCDLRNFIN-----LEKKSQGLMIGWPDAYTCEYPLELKGI
chTLR1L1     PS----VKELQAGQNPFKCSCELQDFLR-----LERQSGGKLSGWPEAYVCKYPEDLSGT
XtTLR1L3     EY----VQYLSAGKNPFQCNCDLREFVK-----MGVMFPKRLIGWPESYKCADPENLRGI
XtTLR1L1     EY----VKYLSAGKNPFQCNCDLREFVK-----MGVMFPKRLIGWPESYKCADPENLRGI
XtTLR1L2     SR----VKHISAGQNPFQCNCELRRFIN-----QEKEAPGTLIGWPEAYVCKYPDHLRGT
fTLR1        RS----LKTLDASSNPFTCTCDLIGFIQLGLKFEKGGAAVTFLQWPHGYYCSYPEAVRDS
tetTLR1      PR----LKTLDVSYNAFMCICPLRGFIRLGLESEKNRTGVTFLQWPQGYYCSYPEAFKDS
tetTLR14     PL----LSYLRAGNNPYHCTCELHAFVQETI----TKDKINLTDWPNYKCYHPEPLLNT
fTLR14       PR----LSHLSAGNNPYHCTCELHAFVQETI----TEGKVNLTDWPNYKCYHPEPLLNT
XtTLR14      PE----LRRLTAGDNPYHCTCDLYAFFTETL----TERRVSLADWPEEYNCYHPPHLLDT
XtTLR14L1    PK----LRNLTAGDNPYGCTCDLYRFFSQIR----EEGRIVLADWPQAYKCYSPPDLLDT
XtTLR14L2    PS----LRNLTAGDNPYDCTCDLYAFFSTLQ----NNDEMLLADWPYDYQCFHPQHLRDT
XtTLR14L3    PQ----LRTLTAGNNPYHCTCDLYSFFSDVL----GKNKITISDWPQSYCCYHPQQLRNT
XtTLR16      SP----LEFIYFIDVTFQCDCDNSWFVTWALE--------DKHTFVSGICSLFCLQLNKK
chTLR15      TS----LSVLTVQGKHFFCNCDLYWFVNIYIR-----NPHLQINGKDDLRCSFPPDRRGS
                                * *                                    .



MdTLR7       -SLIKLNL---------YTCELDLINSILYMTSMFIILCLMVIPVASHLYFWDMWYSYHF
hTLR7        -SVISLDL---------YTCELDLTNLILFSLSISVSLFLMVMMTASHLYFWDVWYIYHF
chTLR7       -SLVFLDL---------NTCELDTSYFIMYALSTSAVLCLMMFAVMSHLYFWDVWYSYHY
XtTLR7       -SLVLLDL---------YTCEQYHLNLILQALSASFIICLMVVSVSSHLFYWDFWFIYHL
tetTLR7      -PVVSVDL---------SACQHNYLSIILYILMTSFILTFFTLSISSHLFLWDIWYIYHF
fTLR7        -PVISVDL---------LACQHNFLSIILYFLMTSFTLIFFTLAISSHLFLWDVWYIYHF
hTLR8        -SIVSLEL---------TTCVSDVTAVILFFFTFFITTMVMLAALAHHLFYWDVWFIYNV
pigTLR8      -SIVSLEL---------TTCVSDTIAAIICFFTFFFVTSTVMLAALAHHWFYWDAWFIYHV
mTLR8        -SIMSLDL---------TTCVSDTTAAVLFFLTFLTTSMVMLAALVHHLFYWDVWFIYHM
MdTLR8       -SIMELEL---------TTCVSDLTAIISFFFSFIITVTTMVMATFHHFFYWDIWYIYHL
XtTLR8       -GIIYFDV---------HTCDLDGAAMILYFFSVFLVMSITVLPILINVFSWDLWYVYHL
tetTLR8      -ILIRFDI---------TQCVNNSKAFLVYILSSSLVISFMLVTTVAHLFYWDFSYVIHY
fTLR8        -VLIKFDI---------TQCVNNSEAFLIYILTSSFVIGFMLVTTVAHLFYWDATYVLHY
hTLR9        -SIFAQDL---------RLCLDEALSWDCFALSLLAVALGLGVPMLHHLCGWDLWYCFHL
pigTLR9      -SIFAQDL---------RLCLDETLSWNCFGISLLAMALGLVVPMLHHLCGWDLWYCFHL
mTLR9        -SIFAQDL---------RLCLDEVLSWDCFGLSLLAVAVGMVVPILHHLCGWDVWYCFHL
ratTLR9      -SIFAQDL---------RLCLDDVLSRDCFGLSLLAVAVGTVLPLLQHLCGWDVWYCFHL
MdTLR9       -SIFLEDL---------HSCQDPVLACSCFALSLLGTLLTLALATLQRLFGWDLWYIFHL
fTLR9        -TILSMDQ---------RSCQDIYGNLASVVCSFLVIGF-TVLPLLKHLYGWDLWYSLQV
tetTLR9      -AMLSMDQ---------PSCQDMYGSLASVICSFLVVAF-TLLPLLKHLYGWDLWYSLQV
XtTLR9       -SLLSMDP---------QSCQELYGHVCFIWSSILVIFL-MVIPTIWNLFFWNLWYAGHL
mTLR3        -PLKLFDT---------SSCKDSAPFELLFIISTSMLLVFILVLLIHIEGWRISFYWNV
hTLR3        -PVRLFDT---------SSCKDSAPFELFFMINTSILLIFIFIVLLIHFEGWRISFYWNV
MdTLR3       -PVMLFDI---------SPCKDSAPFKMFFIINASFLCTLIFVVLLVHFEGWRISFYWNV
chTLR3       -LVLHFDT---------SACKDSAPFKLLFLITTTAVMQFMFIVLLIHFEGWRIAFYWNI
XtTLR3       -PVDTFDS---------SPCKELAPFR-LFVSTFSLMLVFILSVLLIQFQGWRINFYWTV
fTLR3        -SIMTFDP---------LSCKDMTPFRALYVVSSTTVILLLTVALFMRFHGWRIRFYWNI
tetTLR3      -SIMVFDP---------LSCKDSTPFQALFVLSSASVILLLVVALFVRFQGWRIQFYWNI
zebTLR3      -SVMNFDP---------LSCKDMTPFKALYILSSTAVLMLLFISFLVHFQGWRIQFYWNI
cfishTLR3    -SVLDFNP---------ESCKDLVPFQALYVITSSLVLGLMVLAFLVHFQGWRIQFYWNI
hTLR5        -SLFSLS--TEGCD--EEEVLKSLKFSLFIVCTVTLTLFLMTILTVTKFRGFCFICY-KT
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mTLR5        -SLYNIS--TEDCD--EEEAMRSLKFSLFILCTVTLTLFLVITLVVIKFRGICFLCY-KT
MdTLR5       -SLYSIS--TEGCD--EEEALQFIHFSLFIFFTTTLTVFLTAVVTFTRFRGCCFLLWRKM
XlTLR5       -PLHVLE--EGDCD--ESEALTTLMFSLFVLNATIILIGMSTVVTYTHYRGFCFVMY-KR
XtTLR5       -PLHILT--VENCD--DDKVLMPLMFSLFVLTSTTILVLMSTVVTYTHYRGFCFATY-KR
fTLR5        -PLLNYSRTVEACEVDDEESTHGLRFALFVFTAGLVITAVLCGAAYARLRGRIFVAY-KK
tetTLR5      -PLLSYSRSMEPCEVDDEESTRGLRFALFVLTSSLVTAAVLCGAAYARLRGHIFIVY-KK
troutTLR5    -SLLNFS-SVISCEEDDERLVQELRLSLFIGCTALIILIMVGSIFFTRLRGFLFKVY-KK
mTLR13       -LLIDFDD----------AMCNFDLGKVYFLCSFSMVLSTMVFSWFSTKMIASLWYGLYI
ratTLR13     -LLIDFDD----------AMCNFDLGKVYFLCSFSVVLSTMVFSWFSAKMIASLWYGLYI
MdTLR13      -LLVGFDT----------SICNFDTGKICFFCSFSLVLATMVCSWFGTKMISSMRYGIYM
XtTLR13      -MLFENQD----------FSFCTNTGYYFFLGSFIITFSLLTVNLLVVKLKWTVRYMYCM
chTLR21      -YIHSFDT----------HVCFLDLGLYLFAGTAPAVLLLLVVPVVYHRAYWRLKYHWYL
XtTLR21      -YFHDFDT----------HVCDMEIKIKLFCSSFTSILLFIIIPIVYSKFYWMIKYNYFL
fTLR21       -KFFNFDT----------SVCNIDLGQYLFFCTAPWIFLFTVWPLLYVKLYWKIKYSYYV
fTLR23       -NLLDFEV----------QFCWIDVDFLCFLSSTCLVVLTLLTSFTYHFLRWQLLYAFHL
tetTLR23     -KLLDLDV----------HLCWVDLNFLCFLSTSLLVLVMLVASFTYHLLQWHLLYAYHL
fTLR22       -KLLDLDT----------QSCTVNTDFICFISTTCTILLFMAMSFTYHFLRWQLTYAYYF
tetTLR22     -KLLGLDT----------QSCVINTDFICFVSTTCAILLLMAASFAYHFLRWQLTYAYYF
halTLR22     -KLLHFDI----------RSCSVDAGFLMFLSTTCTTLLFMLTSFTYHFLRWHLAYAYYF
troutTLR22   -KLLDVEL----------QFCTVDLGLYYYISTTCLVLLTLIASFAYHFLKWEVIYGYYL
XtTLR22      -KLSTFNL----------SSCRLDYSFIFFLTSTLFITTFIISATVWNFWRWHVIYAYYI
mTLR12       GSLPSFLW----------DHCPQTLELKLFLASSALVFMLIALPLLQEARNSWIPYLQAL
mTLR11       TLLFSFLA----------TNCPHGTEFWGFLTSFILLLLLIILPLISCPKWSWLHHLWTL
hTLR4        MPVLSLN----------ITCQMNK-TIIGVSVLSVLVVSVVAVLVYKFYFH----LMLL
rabbitTLR4   MPVLSFTN----------ATCQISK-TIISVSVFSVLVVSFAVVLVYKFYFP----LMLL
pigTLR4      LPVLSFRN----------ATCQISE-AVISASVLTFLLVSVAGILVYKFYFH----LLLF
mTLR4        SLVLDFNN----------STCYMYK-TIISVSVISVIVVSTVAFLIYHFYFH----LILI
MdTLR4       ISVQLFDD----------STCHMKK-TVIAVSLLGIIVILLVLALVYKFYFH----LMLL
chTLR4       MSLSNFDM----------SSCHPNP-TTVACSVTVLLAAGVFLFLIYKYYFQLYYSLVLL
XtTLR4       LPLTDFTP----------NCSMT---ALISETVLGILCPSLIAITG---------KLIC
zebTLR4      FKATDFDI----------DYCVHKKRLTIVLSVICVTFVVVLAILLYKFWFYVQYCFILF
hTLR2        -QVQDVRL-----------SVSECHRTALVSGMCCALFLLILLTGVLCHRFHGLWYMKM
rabbitTLR2   -QVQDARL-----------SVSECHRAAVVSGVCCALLLLTLLAVVLCRHFHGLWYLKM
pigTLR2      -RVQDTRL-----------SLTECHRVAVVSVVCCALFLLLLLTGALCHHFHGLWCMKM
mTLR2        -RLQDARP-----------SVLECHQAALVSGVCCALLLLILLVGALCHHFHGLWYLRM
MdTLR2       -RVQDVQL-----------SFSECYRVELVAAICSSLFLLALLAGVLCYQFHGLWYMKM
chTLR2       -QVGSVQL-----------SLMECHRSLLVSLICTLVFLFILILVVVGYKYHAVWYMRM
XtTLR2       -RIQDANL-----------PPLVCHKTLIVTLSCILLIALVAAIAALCHFLHVVWYAKM
fTLR2        -LVARVRL-----------PLVHCHPVQVVSASCVVALLATAALGTLLWHVHAFWYLRM
halTLR2      -PVGQIYL-----------SFVLCHRDLFVSLCCGVALVVGILVCVLLWRLHALWYLRM
zebTLR2      -AIDSVRL-----------SVFECYMIPAVSVLCFGIITALGLVVLTCHKLHVIWYLQM
hTLR1        -LLKDFHM-----------SELSCNITLLIVTIVATMLVLAVTVTSLCSYLDLPWYLRM
mTLR1        -ALRDFHM-----------SPLSCDTVLLTVTIGATMLVLAVTGAFLCLYFDLPWYVRM
hTLR6        -PLKDFHM-----------SELSCNITLLIVTIGATMLVLAVTVTSLCIYLDLPWYLRM
pigTLR6      -LLKDFRV-----------SELSCNTALLIVTIGVTGLALALTMTGLCVYFDLPWYLRM
mTLR6        -ALRDFHM-----------SPLSCDTVLLTVTIGATMLVLAVTGAFLCLYFDLPWYVRM
MdTLR1L      -HLKDFHL-----------SPLSCNIVLLLITIVIVVLVFVIVTTFFCVYFDLPWYLRM
hTLR10       -RLKDVHL-----------HELSCNTALLIVTIVVIMLVLGLAVAFCCLHFDLPWYLRM
ratTLR10     -PLKDVYL-----------PELACNTTLLIVTIVLVILVLGLVVAFCILKFDMLWYLRV
MdTLR10      -HLENVDL-----------PALSCNTPLLIAVILIIGLLWTVVIAILCIRFDLPWYLRM
chTLR1L1     -QLEDFHL-----------TELACNTTLLLVTALLLTLVLVAVVAFPCIYLDVPWYVRM
XtTLR1L3     -FLQDFYL-----------PEISCNISMLLGVVLGTIFILSIIVVSACFYFDVPWYIRM
XtTLR1L1     -FLQDFYL-----------PEISCNISMLLGVVLGTIFILSIIVVSACFYFDVPWYIRM
XtTLR1L2     -MLKDFYI-----------SEITCNVFILIPVIILPIIISIALIIGLCKYLDGPWFLKM
fTLR1        -NLNNFWI-----------PEISCNSYLLAAAILCPAVVVMTVVLTLCRHFDIPWYLGM
tetTLR1      -NLNNIWI-----------SEISCNTGLLAAAILCPAVVTISVVLMLCRHFDIPWYVGM
tetTLR14     -VISQYLP-----------GKVACDIRLVIVICVAATTFVVLILVLICYIFDLPWYTKA
fTLR14       -VISQYLP-----------GKVACDIRLVIVICVAATTFVVLILVLICYIFDLPWYTKA
XtTLR14      -KVEFYNP-----------GRVECDVRLVVAISVSTTAVVVMLCMLLCWRFDVPWYLRT
XtTLR14L1    -KVEFYNP-----------GKVQCDVRLVVAISVSTTAVVVILSMLLCWRFDVLWYVQT
XtTLR14L2    -DVEDYTP-----------WRVECDVSLVITISVSTTAAIIILCMLVCWRFDVPWYLRM
XtTLR14L3    -RVDIYTP-----------GSIECNVGLLVAITVSTTAVVVIACMIMCWRLDAPWYFRM
XtTLR16      FNLVNFSE----------SSCRQEIDFMLFVITFTSLLLFIVLTMLCNIFNSDIIQLFYV
chTLR15      -LVKSSN-----------LTLLHCSLGIQMAITACMAILVVLVLTGLCWRFDGLWYVRM


MdTLR7       CKAKLKGYQRLI------------SPQFCYDAFIVYDTSDPKVVEWVFKELVENIESQGD
hTLR7        CKAKIKGYQRLI------------SPDCCYDAFIVYDTKDPAVTEWVLAELVAKLEDPRE
chTLR7       CTAKLKGYRRIP------------LPDACYDAFIAYDNTDLAVNEWVMTELVEKLEDQKA
XtTLR7       FKAKIHGYKRFP-------------KCCYDALIMYDTKDSAVSDWVFNDLVNILEKQGN
tetTLR7      CRAKLKGYNRLY------------SQSSVYDAFMVYDKEDPAVSEWVMKEMCVQLEGRED
fTLR7        CRAKLKGYSQLS------------SQSSVYDAFVMYDKEDSAVSEWVMKEMCVQLEGRED
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```
hTLR8        CLAKVKGYRSLS------------TSQTFYDAYISYDTKDASVTDWVINELRYHLEESRD
pigTLR8      CLAKVKGYRSLP------------TSQTFYDAYVSYDTKDASVTDWVMNELRFHLEESEG
mTLR8        CSAKLKGYRTSS------------TSQTFYDAYISYDTKDASVTDWVINELRYHLEESED
MdTLR8       CSAKIKGYKSLS------------TSQTFYDAFVAYDTKDTCVTDWVINGLRFQLEENED
XtTLR8       CVAKLRLHKVCK------------SECLYDVFITYDNKDPNVNDWIFNELCQHLEDKGD
tetTLR8      MKARIKGYRSLN------------SPDILYDAFVTYDTRDPHVSEWVMKNLLAKLEEEGE
fTLR8        MKAKLKGYSSLN------------SSEILYGAFVTYDTRDPHVSEWVMKNLLVKLEEEGE
hTLR9        CLAWLPWRGRQSG---------RDEDALPYDAFVVFDKTQSAVADWVYNELRGQLEECRG
pigTLR9      CLAWLPHRGQRRG----------ADALFYDAFVVFDKAQSAVADWVYNELRVQLEERRG
mTLR9        CLAWLPLLARSR---------RSAQTLPYDAFVVFDKAQSAVADWVYNELRVRLEERRG
ratTLR9      CLAWLPLLTRGR---------RSAQALPYDAFVVFDKAQSAVADWVYNELRVRLEERRG
MdTLR9       GLSWLPWRAWQKR--------KAPAQAYDYDAFVVFDKAQEAVADWVYNELRVRLEEAKG
fTLR9        LWAGFKGYSQLTG----------QDTKYNYDAFVVFDTSDLAVRDWVYNELLVNLENSAH
tetTLR9      FWAECKGYSQLSG----------RDVKYNYDAFVVFDTSKLDVRDWVYNELLVHLENSAH
XtTLR9       IVATLRSYTKLHD----------KSTEH-FDAFIAFNTKNSSVRDWVYNELLVQLESPER
mTLR3        SVHRILGFKEID----------TQAEQFEYTAYIIHAHKD---RDWVWEHFSPMEEQ---
hTLR3        SVHRVLGFKEID----------RQTEQFEYAAYIIHAYKD---KDWVWEHFSSMEKE---
MdTLR3       TIHRALGFKEIE----------RQQEQFDYAAYIIHAQED---SRWIWKYFSPMEEK---
chTLR3       SINRILGFKELD----------RLPGVFDYDAYVIHARKD---TNWVLTNFTTLEEN---
XtTLR3       SINRILGFKEID----------PRKRNFDYDAYIIHAQND---VSWVENHLIPLEKN---
fTLR3        VVNRTLGFS--------DATVEEGRQFEYDAYVIHAEDD---GGWVERRLLPLENG---
tetTLR3      MVNRTLGFS--------DAAVGEGRQFEYDAYVIHAEAD---GAWVERRLLPLENE---
zebTLR3      MANRMLGS--LK------DAKVTEGR-FQFDAYIIHAGED---KSWVERSLLSLEDK---
cfishTLR3    LVNRTLDINDSR------YKRVAECR-YEYKAYVVHAQED---RLWVERSLLPLEDK---
hTLR5        AQRLVFKDHPQGT----------EPDMYKYDAYLCFSSKD---FTWVQNALLKHLDTQYS
mTLR5        IQKLVFKDKVWSL----------EPGAYRYDAYFCFSSKD---FEWAQNALLKHLDAHYS
MdTLR5       FLTLALEYHPQGV----------KEDQHKYDAYLCFSSKD---FEWVQNAFLNHLDSQYS
XlTLR5       IISFIIDTEKQEE----------AADTCKYDAYLCYSGKD---FQWVQDAFLQNLDTQYS
XtTLR5       ILGLIIGNEKKEE----------AADACKYDAYLCYSSKD---FQWVQDAFLRNLDTQYC
fTLR5        IMRKVLDAPKPPA----------ITDEQPYDVFLCFSSKD---YRWVEAAVLKKLDSQLS
tetTLR5      ILRRVVDDPKRAA---------TADEGQYDVFLCFSSGD---YRWVEAAVLKKLDSQLS
troutTLR5    LTARILEGPRRDP----------SADGPRYDAYLCFSNND---YKWVETALLNRLDSQFA
mTLR13       CRAWYLTKWH------------KTEKKFLYDAFVSFSATD---EAWVYKELVPALEQGSQ
ratTLR13     CRAWYLTKWH------------KTEKKFLYDAFVSFSATD---EAWVYKELVPALEEGSQ
MdTLR13      FKSLYLAKWH------------RTEREFVYDAFVSFNAAD---EEWVYKELVPALEKVGQ
XtTLR13      LEVWFRWKLE------------TTDKVHKYDAYISYCEDD---EIWVVEKLLHMLEEQGQ
chTLR21      LRCWVNQRWR----------REEKCYLYDSFVSYNSAD---ESWVLQKLVPELEHG--
XtTLR21      FVAWLHERWK-----------SEKELYKYDAFVSYNTHD---EEWVYKIMLPVLETS--
fTLR21       FRSWFSEQWRRLR--------EKEENCKYDAFISYNSSD---ELWVMNELLPNLEGNG-
fTLR23       FLAFIYDNRNRKQ--------QNPLP--YDAFVSYNVED---ELWVYEEMLPALEDQQ-
tetTLR23     LLAFVYDRRNRRR--------TRPHG--YDAFVSYNVKD---ELWVYEEMLPALEEQQ-
fTLR22       FLALLADKKRKNQ--------QTPR--QYDAFVSYNAHD---EHWVLRNLLPKLEEEQ-
tetTLR22     FLALLVDTKYKNR--------ETPH--QYDAFVSYNAHD---ELWVLRYLLPTLEEQQ-
halTLR22     FLALLFDTKHKNK--------QPPN--QYDAFISYNTHD---EPWVVRELLPKLEGEQ-
troutTLR22   FLAFLYDTKQRNK--------HKPHGCQYDAFISYNAHD---EPWVLRELLPELEGEQ-
XtTLR22      TLAFLYNRRWQGK--------KQKCK--YDAFISYNFHD---EKWVFRQLVPNLEGRY-
mTLR12       FRVWLQGLRGK-G--------DKGKRFLFDVFVSHCRQD---QGWVIEELLPALEGFLP
mTLR11       FHTCWWKLCGH-R--------LRG-QFNYDVFISYCEED---QAWVLEELVPVLEKAPP
hTLR4        AGCIKYG-RGEN---------------IYDAFVIYSSQD---EDWVRNELVKNLEEGVP
rabbitTLR4   VGRRKYG-RGES---------------VYDAFVIYSSQD---EDWVRNELVKNLEEGVP
pigTLR4      VGCKKYG-RGES---------------TYDAFVIYSSQD---EDWVRNELVKNLEEGVP
mTLR4        AGCKKYS-RGES---------------IYDAFVIYSSQN---EDWVRNELVKNLEEGVP
MdTLR4       AGCKNIG-GGES---------------IYDAFVIYSSQD---EDWVRKELVKNLEEGVP
chTLR4       SGCKHSAERGD---------------IYDAFVIHSSKD---QEWVMKELVEPLEEGKP
XtTLR4       NKCKRNHDNNY---------------VYDAFVMYSNAD---------QLVPKLEN-EN
zebTLR4      SGYRSPGQQECS---------------YDAFVIFSSYD---EAWVMNELMENLENGVP
hTLR2        MWAWLQAKRKPR---------KAPSRNICYDAFVSYSERD---AYWVENLMVQELENFNP
rabbitTLR2   TWAWLQAKRKPR---------KAACRDVCYDAFVSYSEHD---SYWVENLLVQELENSDP
pigTLR2      MWAWLQAKRKPR---------KAPRRDVCYDAFVSYSEQD---SYWVENLMVQELEHFQP
mTLR2        MWAWLQAKRKPK---------KAPCRDVCYDAFVSYSEQD---SHWVENLMVQQLENSDP
MdTLR2       MWAWLQAKRKPR---------RNPDREICYDAFVSYSEGD---SHWVENFMVQELENFDP
chTLR2       TWAWLQAKRKPK---------RAPTKDICYDAFVSYSEND---SNWVENIMVQQLEQACP
XtTLR2       TWAWLKAKRKPL---------KNCDREICYNGFVSYSERD---SEWVENMMVPKLENAVP
fTLR2        MWAWLKAKHSSRQRRG-LDQRGGAGVEDDFDAFVSYSNRD---AGWVENFLVPELEQPRA
halTLR2      MWAWLRAKHSSRRRR--LRNRLESEALLSYDAFVSYSEKD---AGWVETFLVPELEEPRE
zebTLR2      TKAWIQAKRKPAVGR--------LPEELRYDAFVSYSQHD---AEWVEEILVAELEDTQP
hTLR1        VCQWTQTRRRARNIPL-----EELQRNLQFHAFISYSGHD---SFWVKNELLPNLEKEG-
mTLR1        LCQWTQTRHRARHIPL-----EELQRNLQFHAFVSYSGHD---SAWVKNELLPNLEKDD-
hTLR6        VCQWTQTRRRARNIPL-----EELQRNLQFHAFISYSEHD---SAWVKSELVPYLEKED-
pigTLR6      LCQWTQTRRRARNVPL-----EELQRTLQFHAFISYSEHD---SAWVKNELVPCLEKEG-
mTLR6        LCQWTQTRHRARHIPL-----EELQRNLQFHAFVSYSEHD---SAWVKNELLPNLEKDD-
MdTLR1L      IFQWARMRRRARNIPL-----DELEKEVQFHAFISYSELD---SPWVKHELLPNLEQEE-
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hTLR10      LGQCTQTWHRVRKTTQ-----EQLKRNVRFHAFISYSEHD---SLWVKNELIPNLEKEDG
ratTLR10    LAQCIRTQHRIRKTVR-----EERKRSIQFHAFISYAAHD---SVWVKNELIPNLETEDG
MdTLR10     ISQWTQNRHRVRNVPI-----EELKRTIQFHAFISYSEMD---SLWVKSELIPNLEKEDR
chTLR1L1    LWQWTQTKRRAWHDCP-----EERETALQFHAFISYSERD---SLWVKNELIPNLEKGEG
XtTLR1L3    LFRWFRTKHRLRNVNQ-----QDIQNDKLFHAFISYSQED---SDWVKNMLLPNLERKDG
XtTLR1L1    LFRWFRTKHRLRNVNQ-----QDIQNDKLFHAFISYSQED---SDWVKNMLLPNLERKDG
XtTLR1L2    IWQYTRTKQRTRTSKQGY---QSLQRDFDFNAFISYSEHD---ASWVKNIFLPSIERSND
fTLR1       IWQWMQAKHRARQRQPRP----EVLLGIEFHAFVSYSYSQKD---AAWVFDHLLPNLESPAG
tetTLR1     IWQWTRAKHRAR-HQLRP----QDLVGIKFHAFVSYSQKD---RDWVWDYLLPNLEGPAG
tetTLR14    TFQIIRAKYRAHKEKA-----AGEEGPFTYHAFISYSHSD---ADWVRDQLLPCLENNNN
fTLR14      TFQIIRAKYRAHKEKA-----AGEEGPFTYHAFISYSHSD---ADWVRDQLLPCLENNNN
XtTLR14     TCSIVQSKYRSRSFHD-----SRD---YNYHAFISYSHSD---ADWVRGELLYRLESCSP
XtTLR14L1   MFAIVQSKYRSRNMGN-----TKD---YLYHAFISY-----------------------
XtTLR14L2   TWRIVKSKYRSKKSNK-----SRE---YNYHAFISYSYSD---ADWVRGELLYRLESCSP
XtTLR14L3   MCHIVKSKYRSKKAND-----SRE---YNYHAFISYSYSD---ADWVRGELLYRLESCSP
XtTLR16     FQIWLKKLRGKTN---------NPIAYEYDAFVSYCSRD---QGWVVNYLVPNLEEKGR
chTLR15     GWYWCMAKRRQYK--------KRPENKPFDAFISYSEHD---ADWTKEHLLKKLETDG-
                                             :      .   .

MdTLR7      K-----------QFNLCLEERDWIPGKPVLENLSHS-IQLSRKTVFVMTNA------YVK
hTLR7       K-----------HFNLCLEERDWLPGQPVLENLSQS-IQLSKKTVFVMTDK------YAK
chTLR7      R-----------QFNLCLEERDWLPGQPVFDNLSQS-IQLSKKTIFVLTNK------YIK
XtTLR7      K-----------MLNLCLEERDFLAGQPFLDNLSES-IQISRKTVFVLTRK------YVK
tetTLR7     R-----------RLALCLEERDWIPGTPLLDNLSQS-IHKSKRTVFILTST------YIK
fTLR7       R-----------RLTLCLEERDWIPGTPVIDNLSQS-IHRSKRTVFILTNT------YIK
hTLR8       K-----------NVLLCLEERDWDPGLAIIDNLMQS-INQSKKTVFVLTKK------YAK
pigTLR8     K-----------NVLLCLEERDWDPGLAIIDNLMQS-INQSKKTIFVLTKK------YAK
mTLR8       K-----------SVLLCLEERDWDPGLPIIDNLMQS-INQSKKTIFVLTKK------YAK
MdTLR8      K-----------KVFLCLEERDWDPGIAIIDNLIQS-INQSKKTLFVLTKK------YAK
XtTLR8      K-----------HMYLCLEERDWEPGKAIIDNLAHS-INQSKKTLFVLTKK------YVK
tetTLR8     K-----------YLPLCLEERDWTPGVPLIDNLTQS-IRYSRKTLFVLTQD------YVK
fTLR8       K-----------NLPLCLEERDWTPGVPLVDNLTQS-IRYSRKTLFVLTQD------YVK
hTLR9       RW----------ALRLCLEERDWLPGKTLFENLWAS-VYGSRKTLFVLAHT------DRV
pigTLR9     RR----------ALRLCLEERDWLPGKTLFENLWAS-VYSSRKTLFVLAHT------DRV
mTLR9       RR----------ALRLCLEDRDWLPGQTLFENLWAS-IYGSRKTLFVLAHT------DRV
ratTLR9     RR----------ALRLCLEDRDWLPGQTLFENLWAS-IYGSRKTLFVLAHT------DKV
MdTLR9      RGKGW------LRFRLCLEDRDWLPGKSLIENLWDS-VYKSRKTLFVLSPRRDPLLGQPV
fTLR9       RM----------FCLCLEERDWVPGFSCIENLHNA-VSSSVKTMFVLSTG----TIESM
tetTLR9     RR----------FCLCLEERDWVPGLSCIENLHNA-VSSSMKTVFVLSND----TLEPM
XtTLR9      GG----------FTLCLEERDWIAGRSSIENLYDS-IYRSKKTIFIITRE----WFN--
mTLR3       DQ---------SLKFCLEERDFEAGVLGLEAIVNS-IKRSRKIIFVITHH------LLK
hTLR3       DQ---------SLKFCLEERDFEAGVFELEAIVNS-IKRSRKIIFVITHH------LLK
MdTLR3      DH---------SLRFCLEERDFEAGRPELEAIVHS-IKRSRKIIFVVTQN------LLK
chTLR3      EQF--------QVKFCLEERDFEAGISEFEAIINC-IRRSRKIIFIVTEH------LLQ
XtTLR3      AGS--------KLQFCFEERDLEAGTSTLSAFVDC-INRSRKTIFVVTRN-----LLN
fTLR3       -----------RCKFCLEVRDSNLGMSQLESIVNN-IRNSRKILFVVTET------LLM
tetTLR3     -----------KCKFCLEIRDSNPGMSQLESIVNN-IRNSRKILFVVTET------LLR
zebTLR3     -----------DLNFFYEQRDSTPGHSRLKTIVDN-MVHSRKITFVITEM------LLK
cfishTLR3   -----------DFKFFLEDRDAMPGSSRLETIVDN-MRISRKILFVVTEA------LLN
hTLR5       DQ---------NRFNLCLEERDFVPGENRIANIQDA-IWNSRKIVCLVSRHF------LR
mTLR5       SR---------NRLRLCFEERDFIPGENHISNIQAA-VWGSRKTVCLVSRHF------LK
MdTLR5      PK---------NRFNLCFEERDFLPGEDHINNIRDA-ICNSKKTICIVTRHF------LK
XlTLR5      DR---------NRFHFCFEERDFVPGEDHIVNIRDA-IWNSKKTICVVTKQF------LK
XtTLR5      DR---------NRFRLCFEERDFIPGEDHIVNIRDA-IWNSKKTICIVQSS--------S
fTLR5       D----------NTFRCCLEARDFLPGEDHLSNIRDA-SWGSRKTLCVVSKEF------LK
tetTLR5     EG---------NAFRCCFEARDFLPGEDHLSNIRDA-IWGSRKTLCIVSNRF------LK
troutTLR5   ER---------NVLRCCFEVRDFLPGEDHLFNIRDA-IWGSRKTVCIVSKGF------LK
mTLR13      -----------TTFKLCLHQRDFEPGIDIFENIQNA-INTSRKTLCVVSNH------YLH
ratTLR13    -----------TTFKLCLHQRDFEPGIDIFENIQNA-INASRKTLCVVSNH------YLH
MdTLR13     -----------PTFKLCLHHRDFELGVDIFENIQNA-INTSRKTLCIVSNN------YLQ
XtTLR13     -----------RKFKLCFKPRDFVPGIYHLDNIQDA-ISNSRKTLCVVSRK------YLE
chTLR21     -----------AFRLCLHHRDFQPGRSIIDNIVDA-VYNSRKTVCVVSRS------YLR
XtTLR21     -----------ALRLCLHHRDFQLGRDIIDNIVDS-IHNSRKTICVVSRS------YLQ
fTLR21      -----------SSFKICLHHRDFEPGRYIIDNIVSA-VYSSRKTICVVSRN------YLS
fTLR23      -----------GWKLCLHHRDFQPGKPIMENITDA-IYNSRKTICVISRS------YLQ
tetTLR23    -----------GWKLCLHHRDFQPGKPIIENITDA-IYSSRKTICVISRS------YLQ
fTLR22      -----------GWALCLHHRDFEPGKPIIENITDA-IYGSRKTICVISRR------YLE
tetTLR22    -----------GWRLCLHHRDFEPGKPIVENITDA-IYGSRKTICVISRR------YLE
halTLR22    -----------GWRLCLHHRDFMPGKPIVENIVDA-IYGSRKTICVISRR------YLE
troutTLR22  -----------GWKLCLHHRDFQPGKPIIDNIMDG-IYGSRKTICVISHR------YLE
XtTLR22     -----------NWRLCLHHRDFEPGKAIVDNIVDS-IYSSRKTICIISRH------YLE
mTLR12      AG---------LGLRLCLPERDFEPGKDVVDNVVDS-MLSSRTTLCVLSGQ------ALC
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mTLR11      EG---------EGLRLCLPARDFGIGNDRMESMIAS-MGKSRATLCVLTGQ------ALA
hTLR4       P-----------FQLCLHYRDFIPGVAIAANIIHEGFHKSRKVIVVVSQH------FIQ
rabbitTLR4  P-----------FRLCLHYRDFIPGVAIAANIIQEGFHKSRKVIVVVSQH------FIQ
pigTLR4     P-----------FHLCLHYRDFIPGVAIAANIIQEGFHKSRKVIVVVSQH------FIQ
mTLR4       R-----------FHLCLHYRDFIPGVAIAANIIQEGFHKSRKVIVVVSRH------FIQ
MdTLR4      S-----------FQLCLHYRDFIPGVAIAANIIQEGFHKSRKVIVVISEH------FIQ
chTLR4      P-----------FQLCLYFRDFLPGVPIVTNIIQEGFLSSRNVIAVISAD------FLE
XtTLR4      G-----------FIICLHYRDFVPGVPIVTNISNS-ILNSQKVSVVLSQT------FLE
zebTLR4     P-----------IQLCLHMRDFQAGKSIASNIIDEGIMGSRKIIVVVSQH------FID
hTLR2       P-----------FKLCLHKRDFIPGKWIIDNIIDS-IEKSHKTVFVLSEN------FVK
rabbitTLR2  P-----------FRLCLHKRDFVPGKWIIDNIIDC-IEKSRKTVFVLSQN------FVK
pigTLR2     P-----------FKLCLHKRDFIPGKWIIDNIIDS-IEKSQKTIFVLSEN------FVK
mTLR2       P-----------FKLCLHKRDFVPGKWIIDNIIDS-IEKSHKTVFVLSEN------FVR
MdTLR2      P-----------FRLCLHKRDFVPGKWIIDNIIDS-IDKSHKTLFVLSES------FVK
chTLR2      P-----------FRLCLHKRDFVPGKWIIDNIIDS-IEKSHKTLFVLSEH------FVQ
XtTLR2      P-----------MKLCLHKRDFVPGKWIIDNIIDA-MEKSYKTVFVLSEH------FVR
fTLR2       DDEAAVR---ARPMTLCLHKRDFLPGHWILDNIMSA-MERSRRTIFVLSEN------FIR
halTLR2     TDEDSVNHTDPRPLTLCLHKRDFLPGHWIMDNIMSA-MERSRRTVFVLSQN------FVQ
zebTLR2     S-----------FSLCLHKRDFRPGRWIVDNIIDS-IEKSYRTLFVLSEH------FVS
hTLR1       ------------MQICLHERNFVPGKSIVENIITC-IEKSYKSIFVLSPN------FVQ
mTLR1       ------------IQICLHERNFVPGKSIVENIINF-IEKSYKSIFVLSPH------FIQ
hTLR6       ------------IQICLHERNFVPGKSIVENIINC-IEKSYKSIFVLSPN------FVQ
pigTLR6     ------------IKICLHERNFVPGKSIMENIINC-IEKSYKSIFVLSPN------FVQ
mTLR6       ------------IRVCLHERNFVPGKSIVENIINF-IEKSYKAIFVLSPH------FIQ
MdTLR1L     ------------IRICLHERNFVPGKSIVENIINC-IEKSHKSIFVLSPN------FIQ
hTLR10      S-----------ILICLYESYFDPGKSISENIVSF-IEKSYKSIFVLSPN------FVQ
ratTLR10    S-----------VLLCLPERNFDPDRSIAENIISC-TEKSYKSIFVLSPN------FVQ
MdTLR10     S-----------ISICLHERHFVPGKSIIENIINC-IEKCYKSIFVLSPN------FVQ
chTLR1L1    C-----------IQLCQHERNFIPGKSIVENIINC-IEKSYKSIFVLSPN------FVQ
XtTLR1L3    S-----------IKICHHERHFIPGKAIIENIIDC-IEKSFKSIFVLSPN------FIQ
XtTLR1L1    S-----------IKICHHERHFIPGKAIIENIIDC-IEKSFKSIFVLSPN------FIQ
XtTLR1L2    C-----------IRICQHERNFIPGKSIIENIINC-IEKSYKSIFILSPN------FVQ
fTLR1       G-----------LRICHHGKNFVPGKPIINNIMTC-VEKSRRCVFVLSAH------FVK
tetTLR1     G-----------LRICHHEKNFVPGRTIINNILTC-VETSRRCVFVLSAH------FIK
tetTLR14    P-----------YRLCIHERDFTPGRWIIDNIIEN-IENSRKVIFVLSRH------FVN
fTLR14      P-----------YRLCIHERDFTPGRWIIDNIIEN-IENSRKVIFVLSRH------FVN
XtTLR14     P-----------YRVCIHERDFLPGRWIIDNIIEN-IESSRKIIFVLSRN------FVN
XtTLR14L1   --------------------------------------IENSRKIIFVLSRN------FVN
XtTLR14L2   P-----------YRVCIHERDFLPGRWIIDNIIEN-IENSRKIIFVLSSN------FIN
XtTLR14L3   P-----------YRVCIHERDFLPGRWIIDNIIDN-IETSRKTIFVLSHN------FVN
XtTLR16     N-----------TIKLCLHNRDFLVGKDIVDNIMDS-IYKSRKTICLISYN------YLQ
chTLR15     ------------FKICYHERDFKPGHPVLGNIFYC-IENSHKVLFVLSPS------FVN
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MdTLR7      SGNFK-TAFYLSHQRLMDE--KVDVIILIFLE--KAFQRSKYLQLRKRLCK-SSVLEWP-
hTLR7       TENFK-IAFYLSHQRLMDE--KVDVIILIFLE--KPFQKSKFLQLRKRLCG-SSVLEWP-
chTLR7      SGTFK-TTFYMAHQRLLDE--KIDVIILIFLE--KVLQKSRYVQLRKRLCR-SSVLEWP-
XtTLR7      KGHFK-TAFYMAHQRLIEE--KVDVIILILLE--KTLQRSRYLRLRKDYVQ---------
tetTLR7     SGSFK-TAFYMAHQRLMDE--KNDVIVLIFLE--KIPSNSKYLRLRRRLYR-RSVLEWP-
fTLR7       SGSFK-TAFYMAHQRLMDE--KNDVIVLIFLE--NIPYNSRYLRLRRRLYR-RSVLEWP-
hTLR8       SWNFK-TAFYLALQRLMDE--NMDVIIFILLE--PVLQHSQYLRLRQRICK-SSILQWP-
pigTLR8     NWNFK-TAFYLALQRLMDE--NMDVIVFILLE--PVLQHSQYLRLRQRICK-SSILQWP-
mTLR8       SWNFK-TAFYLALQRLMDE--NMDVIIFILLE--PVLQYSQYLRLRQRICK-SSILQWP-
MdTLR8      NWNFK-TAFYLALQRLMDE--NMDVIIFILLE--PVLQHSQYLRLRRRICK-SSVLKWP-
XtTLR8      SGKFK-IAFYLALQKLMDE--NMDVIVIVLLE--PVLQNSQYLKLRRKICK-SSIMEWP-
tetTLR8     TGIFK-MAMYLAHQRLLDE--NVDVILLLMLE--PVLQHSHFLRLRRRLCG-ESVLDWP-
fTLR8       TGIFK-MAMYLAHQRLLDE--NVDVIVLLLLE--PVLQHSHFLRLRRRLCG-ESVVDWP-
hTLR9       SGLLR-ASFLLAQQRLLED--RKDVVVLVILS--PDGRRSRYVRLRQRLCR-QSVLLWP-
pigTLR9     SGLLR-ASFLLAQQRLLED--RKDVVVLVILR--PDAYRSRYVRLRQRLCR-QSVLLWP-
mTLR9       SGLLR-TSFLLAQQRLLED--RKDVVVLVILR--PDAHRSRYVRLRQRLCR-QSVLFWP-
ratTLR9     SGLLR-TSFLLAQQRLLED--RKDVVVLVILR--PDAHRSRYVRLRQRLCR-QSVLFWP-
MdTLR9      SGLLR-ATFHLAQQRLLED--KQDVVVLVILN--RAVGRSRYVRLRQRLCR-QTVLFWP-
fTLR9       SGMIR-QAFFMVQQRLLDE--KVDTAVLVLLD--EMFPKLKYLQLRKRLCR-KSVLSWP-
tetTLR9     SGVIR-QAFFMVQQRLLDE--KVDAAVLVLLD--ETFPKVKYLQLRKRLCR-KSVLSWP-
XtTLR9      CGLLR-HAFFMSNQRLLDE--KKDVVALVVLD--HKMKMSQYFLTRKRLCP-KSFLNWP-
mTLR3       DPLCRRFKVHHAVQQAIEQ--NLDSIILIFLQNIPDYKLNHALCLRRGMFKSHCILNWP-
hTLR3       DPLCKRFKVHHAVQQAIEQ--NLDSIILVFLEEIPDYKLNHALCLRRGMFKSHCILNWP-
MdTLR3      DPLCKR------------------------------------------------------
chTLR3      DPWCRKFKVHHALQQAIEQ--SRDSIILIFLHNIQDYKLNHALCLRRGMFRSCCILNWP-
XtTLR3      DSWCRR------------------------------------------------------
fTLR3       DPWCRRFTAHQALHQVIEA--SRDSVVLVFLQDVHDYKLSRTLFLRRGMLRSCCVLYWP-
tetTLR3     DPWCRRFTARQALHQVIEA--SRDSVVLVFLQDVHDHRLSRTLFLRRGMLRSCCVLYWP-
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zebTLR3      DPWCRQFKAHHALHHVMED--NRDSLILIFLEDVTDYNLNRSLHLRRGMLKPKCVLYWP-
cfishTLR3    DPWCRQFKVHHALHQLMEE--NRDSLVLIFLEDVADYRLTQSLMLRKGMLKHRCMLQWP-
hTLR5        DGWCL-EAFSYAQGRCLSD--LNSALIMVVVGSLSQYQLMKHQSIRGFVQK-QQYLRWP-
mTLR5        DGWCL-EAFRYAQSRSLSD--LKSILIVVVGSLSQYQLMRHETIRGFLQK-QQYLRWP-
MdTLR5       DGWCI-EAFNFAQSRYFSD--LKDVLIMVVAGSLSQYQLMKYPPIRVFVQR-QPYLKWP-
XlTLR5       DGWCV-EALNYAQSRYFTD--LKDVLIMVVVGSLSQYQLMKYQPIRAYVKR-CQYLKWP-
XtTLR5       DGWSL-S-LNYAQSRYFTE--LKDVLIMVVVGSLSQYQFMKYQPIRAYVKR-AQYLRWP-
fTLR5        DGWCL-EAFSLAQGRMLEE--LTNILVMVVVGKVAHYQLMRCKAVRVFVQK-RQYLTWP-
tetTLR5      DGWCL-EAFTLAQGRMLEE--LTNTLVMLVVGKVAHYQLMRCNAVRAFVQK-REYLTWP-
troutTLR5    DGWCL-EAFTLAQSRMLEE--LRDVLIMVVVGNVPHYRLMKHEGIRTFAQK-REYLQWP-
mTLR13       SEWCR-LEVQLASMKMFYE--HKDVIILIFLEEIPNYKLSSYHRLRKLINK-QTFITWP-
ratTLR13     SEWCR-LEVQLASMKMFYE--HKDVIILIFLEEIPNYKLSSYHRLRKLINR-QTFITWP-
MdTLR13      SEWCR-LEVQLASLQMFYD--YQDVIILIFLEEIPNYRLSSYHRLRKLVKR-QTFITWP-
XtTLR13      SEWCR-EEMQLACSWAFSY--KEDVLLMVFLEEIPEYR--------------------
chTLR21      SEWCS-LEVQLASYRLLDE--RRDILVLVLLEDVGDAELSAYHRMRRVLLR-RTYLRWP-
XtTLR21      SEWCS-LEMQLASYKLFDE--MRDVLVLILLDNIPDRELSTYHRMRKLMLK-KTYITWP-
fTLR21       SEWCS-LEIQLASYRLFDE--HRDVLLLVLLEPISERQLSSYHRMRKVMLK-KTYLQWPG
fTLR23       SEWCS-REIQMASFRLFDE--QKDVLILLFLEEIPAHQLSPYHRMRKLLKR-QTYLSWT-
tetTLR23     SEWCS-REIQMASFRLFDE--QKDVLILLFLEEIPAHQLSPYHRMRKLLKR-QTYLSWA-
fTLR22       SEWCS-REIQVASFRLFDE--QKDVLILIFLEDIPTRQLSPFYRMKKMLKS-KTYLSWP-
tetTLR22     SNWCS-REIQVASFRLFDE--RKDVLILIFLEDIPISQLSPFYRMKKMLKR-KTYLSWP-
halTLR22     SEWCS-REMQVASFRLFDE--QKDVLILVFLEDIPTDELSPYYRMKKLLNK-MSYLSWP-
troutTLR22   SEWCS-REIQVASFRLFDE--QKDVLILVFLEDIPTHQLSPYHRMRKLVKR-RSYLSWP-
XtTLR22      SEWCS-KEIQLASFRLFEE--HTDVLILLFLEQIPDHHLSPYHQIRKVIKK-KTYLIWP-
mTLR12       NPRCR-LELRLATSLLLAAP-SPPVLLLVFLEPISRHQLPGYHRLARLLRR-GDYCLWP-
mTLR11       SPWCN-LELRLATYHLVARP-GTTHLLLLFLEPLDRQRLHSYHRLSRWLQK-EDYFDLS-
hTLR4        SRWCI-FEYEIAQTWQFLSS-RAGIIFIVLQKVEK-TLLRQQVELYRLLSR-NTYLEWED
rabbitTLR4   SRWCI-FEYEIAQTWQFLSS-HAGIIFIVLQKVEK-SLLRQRVELYRLLSR-NTYLEWED
pigTLR4      SRWCI-FEYEIAQTWQFLRS-HAGIIFIVLQKLEK-SLLRQQVELYRLLSR-NTYLEWED
mTLR4        SRWCI-FEYEIAQTWQFLSS-RSGIIFIVLEKVEK-SLLRQQVELYRLLSR-NTYLEWED
MdTLR4       SRWCK-FEYEIAQTWQFLSS-QAGIIFIILQKVEK-SLLRQQMELYRLLNR-NTYLEWED
chTLR4       SKWCS-FEFDIARSWQLVEG-KAGIIMIILGEVDK-TLLRQRLGLSRYLRR-NTYLEWKN
XtTLR4       SKWCN-FEFEMAKAWQSLEG-SFQIIVILLEXINK-TQLKKALGLHKYLAK-TTYLELN-
zebTLR4      SSWCR-FEFELAQSRFLMER-NANIIIIILEDVAE-RKTKKVFGLHKHLKK-NTYLKWSR
hTLR2        SEWCK-YELDFSHFRLFEE--NNDAAILILLEPIEKKAIPQRFCKLRKIMNTKTYLEWP-
rabbitTLR2   SEWCK-YELDFSHFRLFDE--NNDAAILVLLEPIEKKAIPQRFCKLRKIMNTRTYLEWP-
pigTLR2      SEWCK-YELDFSHFRLFDE--NDDTAILILLEPIEKKTIPQRFCKLRKIMNTRTYLEWP-
mTLR2        SEWCK-YELDFSHFRLFDE--NNDAAILVLLEPIERKAIPQRFCKLRKIMNTKTYLEWP-
MdTLR2       SEWCK-YELDFSHFRLFDE--NNDTAILILLEPIEKKTIPQRFCKLRKIMNTKTYLEWP-
chTLR2       SEWCK-YELDFSHFRLFDE--NNDVAILILLEPIQSQAIPKRFCKLRKIMNTKTYLEWP-
XtTLR2       SEWCK-YELEFSHFRLFDE--NNDSAILILLEPIENETVPKRFCKLRKLMNTKTYLEWP-
fTLR2        SDWCR-YELDFSHFRLFDG-VAGEPAILILLEPLNKDDIPRRFCKLRKLLSSTTYLEWP-
halTLR2      SDWCR-YELDFSHFWLFDGDTRGEPAILILLEPLSKDDVPKRFCKLRKLMSSTTYLEWP-
zebTLR2      SEWCR-YELDFSHFRIMDE--HNDSAVLVLLEPIKKETIPKRFCKLRKIMNSRTYLEWP-
hTLR1        SEWCH-YELYFAHHNLFHE--GSNSLILILLEPIPQYSIPSSYHKLKSLMARRTYLEWP-
mTLR1        SEWCH-YELYFAHHNLFHE--GSDNLILILLAPIPQYSIPTNYHKLKTLMSRRTYLEWP-
hTLR6        SEWCH-YELYFAHHNLFHE--GSNNLILILLEPIPQNSIPNKYHKLKALMTQRTYLQWP-
pigTLR6      SEWCH-YELYFAHHNLFHE--GSDNLILILLDPIPQNSIPGKYHKLKALMAQRTYLEWP-
mTLR6        SEWCH-YELYFAHHNLFHE--GSDNLILILLEPILQNNIPSRYHKLRALMAQRTYLEWP-
MdTLR1L      SEWCH-YELYFAHHNLFHE--RSDNLILILLEPIPQYNIPAKYHKLKALMARRTYLEWP-
hTLR10       NEWCH-YEFYFAHHNLFHE--NSDHIILILLEPIPFYCIPTRYHKLKALLEKKAYLEWP-
ratTLR10     NGWCH-NELYLAHHNPFRD--NYDYIIPILLEPIPSYCVPTKFPKLKALLEKKVYLEWP-
MdTLR10      SEWCH-YELYFAHHKVFHE--GSNNLILILLEPIHSTAFPS-----------------
chTLR1L1     SEWCH-YELYFAHHRLFSE--NSNSLILILLEPIPSYVIPARYHKLKALMAKRTYLEWP-
XtTLR1L3     SDWCH-YELYFAQHTLFGK--NSNNLILILLDPIPQYSIPNKYNKLRSIMKHRTYLEWP-
XtTLR1L1     SDWCH-YELYFAQHTLFGK--NSNNLILILLDPIPQYLIPNKYNKLRSIMKHRTYLEWP-
XtTLR1L2     SEWCH-YELYFAHHKLYTE--NNDNLILILLEPIPSKYYKLKTLMAQRTYLEWP-
fTLR1        SDWCH-YELYFTSHQHLAL--GSDSVVLVLLEPVPQYLIPSKYYQLKFMMARHTYLEWP-
tetTLR1      SNWCH-YELYFASHQHLAR--SSDSVVLVLLEPVPQYLIPSKYYQLKAMMARHTYLEWP-
tetTLR14     SEWCN-YELYFAQQRAMGK--TFSDVILVVKEPIDPNSLPSKYCKLKKMLSTKTYLEWP-
fTLR14       SEWCN-YELYFAQQRAMGK--TFSDVILVVKEPIDPNSLPSKYCKLKKMLSTKTYLEWP-
XtTLR14      SEWCN-YELYFAHQRAIGH--AFEDVILVVKEKVTMEDLPKRFQKLRKMMRTKTYLEWP-
XtTLR14L1    SEWCN-YELYFAHQRAVGH--ALEDVILVVKEKVTMEDLPKRFQKLRKLLRTKTYLEWP-
XtTLR14L2    SEWCN-YELYFAHQRAIGH--SLEDIILVVKEKVTMEDLPKRFHKLRKMLRTKTYLEWP-
XtTLR14L3    SEWCN-YELYFAHQRAIGH--SFEDVILVVKENVTLKDLPKRFHKLRKMLRKKTYLEWP-
XtTLR16      SDWCS-LEMRMATYKLLAE--KNDDLILVFLESISGYHLSAYHRLARIVRK-KTYIDWP-
chTLR15      SCWCQ-YELYFAEHRVLDE--NQDSLIMVVLEDLPPDSVPQKFSKLRKLLKRKTYLKWS-


MdTLR7       ----TNPQAHPYFWQCLKNAIATDNDTVYSKVFKETL---------------------
hTLR7        ----TNPQAHPYFWQCLKNALATDNHVAYSQVFKETV---------------------
chTLR7       ----TNPRSQPYFWQRLKNAIAMNNTLSYNKLLQETV---------------------
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XtTLR7        ----------TLFYI------------------------------------------
tetTLR7       ----TNPQARPYFWFSLRSVLATESHKQYNNLFKETL--------------------
fTLR7         ----TNPQARPYFWFSVRSVLATESHKQYNNLFKETL--------------------
hTLR8         ----DNPKAEGLFWQTLRNVVLTENDSRYNNMYVDSIKQY-----------------
pigTLR8       ----DNPKAEGLFWQSLKNVVLTENDSRYNSLYVNSIK-------------------
mTLR8         ----NNPKAENLFWQSLKNVVLTENDSRYDDLYIDSIRQY-----------------
MdTLR8        ----DNPRAEDLFWQSLKNVVLTDNDTRYNNLYVKFIK-------------------
XtTLR8        ----KNPNAKGLFWQRMKNVLLTDNCKRYNNFYTDPIENYE----------------
tetTLR8       ----RTAAAEPWFWQNLRNLLRVDNQVMYNKNYSKYFTGK-----------------
fTLR8         ----RTAAAEPWFWQNLRNVVRVENQVMYNKNYSKYFTSK-----------------
hTLR9         ----HQPSGQRSFWAQLGMALTRDNHHFYNRNFCQGPTAE-----------------
pigTLR9       ----HQPRGQGSFWAQLGTALTRDNRHFYNRNFCRGPTTAE----------------
mTLR9         ----QQPNGQGGFWAQLSTALTRDNRHFYNQNFCRGPTAE-----------------
ratTLR9       ----HQPNGQGSFWAQLSTALTRDNHHFYNRNFCRGPTAE-----------------
MdTLR9        ----HQPSGQDSFWAQLCTALATNNRSFYDRNFCRGP--------------------
fTLR9         ----RNPKAQPLFWQLRMALSSDNLSFYDNNMSESFI--------------------
tetTLR9       ----KNPKAQPLFWNQVRMALSSDNLSFYDNNMS-----------------------
XtTLR9        ----CNPKAHSHFWHMLRIYIRQDSRRCCGSQLKKYVDK------------------
mTLR3         ----VQKERINAFHHKLQVALGSRNSAH-----------------------------
hTLR3         ----VQKERIGAFRHKLQVALGSKNSVH-----------------------------
MdTLR3        ---------------------------------------------------------
chTLR3        ----VQKERINAFHQQLMMALKSNSKVR-----------------------------
XtTLR3        ---------------------------------------------------------
fTLR3         ----VHKERVPAFHQKLLIALGMTNRLQD----------------------------
tetTLR3       ----VHKERVAAFHQKLLIALGMTNRLHD----------------------------
zebTLR3       ----LHKERIPAFHQKLRSALASTNKVN-----------------------------
cfishTLR3     ----LQKERIPGFPPEATASVSLE-----------------------------------
hTLR5         ----EDLQDVGWFLHKLSQQILKK---EKEKKKDN----NIPLQTVATIS-----------
mTLR5         ----EDLQDVGWFLDKLSGCILKE---EKGKKRSS----SIQLRTIATIS-----------
MdTLR5        ----EDLQDVGWFLNKLSQRILNK---KEEKKKSN----NIPLQTVATIS-----------
XlTLR5        ----EDIQDVEWFLGRLSYQILKENKVEKKLKKSS----NHELQTIETIS----------
XtTLR5        ----EDIQDVEWFLGRLSYQILKENTVEKKPNQASRKPFNHELQNIETIS----------
fTLR5         ----EDPQDLDWFYERLVSLLLKD---TKVKTFAEDKEEAVAQNTESIQLQGIRAPQL--
tetTLR5       ----EDPQDLDWFYQKLISLLLKH---TKVKK--------------------------
troutTLR5     ----EDTQDIQWFYEKLMSKILKD---KKYTSKDNNRDITLVNMTVGT------------
mTLR13        ----DSVHQQPLFWARIRNALGKET-----VEKENTHLIVVE-----------------
ratTLR13      ----DSAHQQPLFWARIRNALGNET-----VEKENTHLIVVE-----------------
MdTLR13       ----EDFQERPLFWARIRNALGNKT-----VREENARLILTDPLGD-------------
XtTLR13       ---------------------------------------------------------
chTLR21       ----LDPAAQPLFWARLKRALRWVEGGEEEEEEGAGGETLKKWSVALGPQNCSWDAT---
XtTLR21       ----TEPEAQQLFWAKVQEAVSGKR-----PSEGHQGIKIVKW----------------
fTLR21        SECTNPPQAQGLFWSQLRRAIGTTSR----IETEEKGTRVANKEDADASDNHV-------
fTLR23        ---QAGRHQAGVFWQNVQRALESGDAPHDQVDPLTG--PAEP------------------
tetTLR23      ---QAGRHRAGVFWQNVQRALECGDAPHDRVDPLMG--PAQP------------------
fTLR22        ---RAEGHPE-VFWEKLRQALLSKDMLDLKPLARG---ISHKV----------------
tetTLR22      ---RAEGHPL-VFWEKLRQALLEKETVQLRRRKNK---NSHHS----------------
halTLR22      ---RAAEHTE-LFWEKLRQALRTREDQADESFRLT---VVDNQW---------------
troutTLR22    ---RAGEQTG-VFWQQLRLALESKDGSAEENPILSGWRLCDSEP----------------
XtTLR22       ---QERNATS-IFWYRVSQALQTEEREEDEKCLL-------------------------
mTLR12        ----EEEERKSGFWTWLRSRLG------------------------------------
mTLR11        ----QGKVEWNSFCEQLKRRLSKAGQERD-----------------------------
hTLR4         -----SVLGRHIFWRRLRKALLDGKSWNPEGTVGTGCNWQEATSI--------------
rabbitTLR4    ------TVLGRHIFWRRLRKALLDGKTLSPEGMARAENNQQEAMTLI------------
pigTLR4       -----SVLGRHIFWRRLKKALLDGKPWSPEGTEDSESNQHDTTAFT-------------
mTLR4         -----NPLGRHIFWRRLKKALLDGKASNPEQTAEEE---QETATWT-------------
MdTLR4        -----TNLGRHVFWRRLRKALLDGRTKNPKGAAEEEFSQPVSPT---------------
chTLR4        ------KEISRHIFWRQLTSVLLEGKKWNHEEIKLM----------------------
XtTLR4        --------KDLFFWLRLQNSLKNGQ---------------------------------
zebTLR4       -----DPLSNIRFWIRLRKAILQK----------------------------------
hTLR2         ----MDEAQREGFWVNLRAAIKS-----------------------------------
rabbitTLR2    ----TEEAEHAGFWGNLRAAIKS-----------------------------------
pigTLR2       ----ADETQREGFWLNLRAAIKS-----------------------------------
mTLR2         ----LDEGQQEVFWVNLRTAIKS-----------------------------------
MdTLR2        ----RDEGLQEFWFNLRAAIKS------------------------------------
chTLR2        ----PDEEQQQMFWENLKAALKS-----------------------------------
XtTLR2        ----TDEEQQEVFWDNLKTALQSEY---------------------------------
fTLR2         ----HGEEKVGEFWKALRTALRGEEDGRN-----------------------------
halTLR2       ----QEEERRGEFWRSLRSALRGDGEEDE-----------------------------
zebTLR2       ----EDEDKRDEFWSNLRAALQRDEC--------------------------------
hTLR1         ----KEKSKRGLFWANLRAAINIKLTEQAKK---------------------------
mTLR1         ----TEKNKHGLFWANLRASINVKLVNQAEGTCYTQQ---------------------
hTLR6         ----KEKSKRGLFWANIRAAFNMKLTLVTENNDVKS----------------------
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pigTLR6        ----KEKSKHGPFWANIRAAFNIKLKLVAEEDDVKT------------------------
mTLR6          ----TEKGKRGLFWANLRASFIMKLALVNED-DVKT------------------------
MdTLR1L        ----KEKGKQALFWANIRAAFNRKLTLVEEANDVEII-----------------------
hTLR10         ----KDRRKCGLFWANLRAAINVNVLATREMYELQTFTELNEESRGSTISLMRTDCL---
ratTLR10       ----KDRRKHGLFWANLRAAINVNLSDTRGRCELQTFTKPNADCQGSTISLVRTDSF---
MdTLR10        ---------------------------------------------SIIS----------
chTLR1L1       ----KERSKHALFWANLRAVVNIKLPTS-----FETDEEQSDVTSTSSITQCLIK-----
XtTLR1L3       ----KEKGKHALFWANLREAIHVNLSIKEEDMADPEITIT--------------------
XtTLR1L1       ----KEKGKHALFWANLREAIHVNLSIKEEDMADPEVRT--------------------
XtTLR1L2       ----SEKSKHGLFWANLRAAISIDLTHAESEIPYSISSENPCSISSENPHSISSENPYSI
fTLR1          ----QDRAKQRLFWANLRAALQADLPHLTVTEIEE------------------------
tetTLR1        ----QDKAKQRLFWANLRAALQADLPDL-------------------------------
tetTLR14       ----QQVNQQAFFWAQLRSVLGRPTAVTRGRQSVRSRTSSASISVIGPLVDERNPEMDED
fTLR14         ----QQVNQQAFFWAQLRSVLGRPTAVTRGRQSVRSRTSSASISVIGPLVDERNPEMDED
XtTLR14        ----SEQNRQHFFWIQLKSILGKANPPVTSQETL---------SVVSETVAYGTCSVSET
XtTLR14L1      ----LEHTRQHFFWIQLRSILGKVSSPVIGQDDL---------LVDNGAAASWDGPASEA
XtTLR14L2      ----SEPSKQHFFWIQLKSILGDASVSLAGQEGL---------SVVNEAVVG---PVFYL
XtTLR14L3      ----SEPSKQHFFWIQLKNILGSPSTAGALEP---------------------CPASEV
XtTLR16        ----QEENEQAEFWERLRMTVLETKED--------------------------------
chTLR15        ----PEEHKQKIFWHQLAAVLKTTNEPLVRAENGPNEDVIEME----------------


MdTLR7         ----------------------------
hTLR7          ----------------------------
chTLR7         ----------------------------
XtTLR7         ----------------------------
tetTLR7        ----------------------------
fTLR7          ----------------------------
hTLR8          ----------------------------
pigTLR8        ----------------------------
mTLR8          ----------------------------
MdTLR8         ----------------------------
XtTLR8         ----------------------------
tetTLR8        ----------------------------
fTLR8          ----------------------------
hTLR9          ----------------------------
pigTLR9        ----------------------------
mTLR9          ----------------------------
ratTLR9        ----------------------------
MdTLR9         ----------------------------
fTLR9          ----------------------------
tetTLR9        ----------------------------
XtTLR9         ----------------------------
mTLR3          ----------------------------
hTLR3          ----------------------------
MdTLR3         ----------------------------
chTLR3         ----------------------------
XtTLR3         ----------------------------
fTLR3          ----------------------------
tetTLR3        ----------------------------
zebTLR3        ----------------------------
cfishTLR3      ----------------------------
hTLR5          ----------------------------
mTLR5          ----------------------------
MdTLR5         ----------------------------
XlTLR5         ----------------------------
XtTLR5         ----------------------------
fTLR5          ----------------------------
tetTLR5        ----------------------------
troutTLR5      ----------------------------
mTLR13         ----------------------------
ratTLR13       ----------------------------
MdTLR13        ----------------------------
XtTLR13        ----------------------------
chTLR21        ----------------------------
XtTLR21        ----------------------------
fTLR21         ----------------------------
fTLR23         ----------------------------
tetTLR23       ----------------------------
fTLR22         ----------------------------
tetTLR22       ----------------------------
halTLR22       ----------------------------
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troutTLR22        ------------------------------
XtTLR22           ------------------------------
mTLR12            ------------------------------
mTLR11            ------------------------------
hTLR4             ------------------------------
rabbitTLR4        ------------------------------
pigTLR4           ------------------------------
mTLR4             ------------------------------
MdTLR4            ------------------------------
chTLR4            ------------------------------
XtTLR4            ------------------------------
zebTLR4           ------------------------------
hTLR2             ------------------------------
rabbitTLR2        ------------------------------
pigTLR2           ------------------------------
mTLR2             ------------------------------
MdTLR2            ------------------------------
chTLR2            ------------------------------
XtTLR2            ------------------------------
fTLR2             ------------------------------
halTLR2           ------------------------------
zebTLR2           ------------------------------
hTLR1             ------------------------------
mTLR1             ------------------------------
hTLR6             ------------------------------
pigTLR6           ------------------------------
mTLR6             ------------------------------
MdTLR1L           ------------------------------
hTLR10            ------------------------------
ratTLR10          ------------------------------
MdTLR10           ------------------------------
chTLR1L1          ------------------------------
XtTLR1L3          ------------------------------
XtTLR1L1          ------------------------------
XtTLR1L2          SSDNPCLGTSENPCSISSENPYSISSENPC
fTLR1             ------------------------------
tetTLR1           ------------------------------
tetTLR14          RGTEPNYEVIENSLEVSHQRQIPMVAV---
fTLR14            RGTEPNYEVIENSLEVSHQRQIPMVAV---
XtTLR14           PSVPLGKVTLPSS-----------------
XtTLR14L1         HHEDEIYETLIPQ-----------------
XtTLR14L2         YHI---------------------------
XtTLR14L3         PSITYSKINLPGS-----------------
XtTLR16           ------------------------------
chTLR15           ------------------------------
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