

```

10      20      30      40      50      60      70      80      90      100
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Hosa  MAKQLNLPENTDDWTKEDVNWLESHKIDQKHREILTEQDVNGAVLKWLKKHEHLVDMGITHGPAIQIEELFKELRKTAIEDSIQTSKMGKPSKNAPKDOT
SAMD9_Patr  .....
SAMD9_Gogo  .....G.....Q.....T.....
SAMD9_Poab  .....G.....M.....
SAMD9_Nole  .....E.....G.....V.....
SAMD9_Mamu  .....Q.....R.....G.....Q.....R.....
SAMD9_Bota  .A.....E.A.A.S.I.Y.T.D.A.F.....Q.....LE.SSG.PF.C.S.G.SV.T.-
SAMD9_Susc  .A.....K.....R.....D.A.....N.Y.T.I.I.F.....H.....ME.ST.PS.IC.RE.G.DV.K.-
SAMD9_Eqca  .A.....R.....IA.S.I.T.NN.IE.....N.....Q.SS.G.L.N.KK.G.V.T.-
SAMD9_Mylu  .A.....D.R.D.....K.....F.T.N.IE.....Q...K.Q.ESS.P...CQKK.G.KV.T.-
SAMD9_Orcu  .E.PE.....R.....H.D.VA.S...F.SD.IE.....V.G.R.Q.SSK.P.R.EQK.G.VSNK.P
SAMD9_Rano  .ET...K.....L.R.....MA.S.V...N.KN.E.....Q.PK.NLTK.C.KT.GR.I.T.-
SAMD9_Crgr  .EK.....N.L.G.....T.ML.....D.N.E.....A...Q.SSSKQPT...RKRG...I.T.-
SAMD9_Capo  .E.PH...I.....R.....IA.S.T...N.SD.....P.....VG.N.Q.SS.PV.P.AK.S.T.T.GK.H
SAMD9_Soar  .A.P.SK.P.....I.E.N.K.Y...VA...D.L.T.K...V...L.N.V.K.Q.SS.N...REKKTNN.I.EV..

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110     120     130     140     150     160     170     180     190     200
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Hosa  VSQKERRETSKQKQKGENPDMANPSAMS-----TTAKGSKSLKVELI--EDKIDYTKERQPSIDLTCVSYPFDEFNSNPYRYKLDLFSLOPETGP
SAMD9_Patr  .....R.....L.....
SAMD9_Gogo  .....
SAMD9_Poab  ...H.....D.TS.RVTD.TI-----I.S.....M--Q.....N.....I.....
SAMD9_Nole  ...A.....T.....I.....E.....H.....
SAMD9_Mamu  ...S.....D.....T.....I.V.E.....I.....
SAMD9_Bota  ---DGG...--N.KKS.KV.D.TV-----VT.....N.FM--E.D.KK...TEP.MA.....D.....N.K.....
SAMD9_Susc  ---EKN...D.TS.RVTD.TI-----VTE..M.NN.FM--E.ND.QKK.S.VE.M.P.....D.....N.....
SAMD9_Eqca  .M.E.NG...N.KS...APT.....VT.D...N.FK--VNE..D...K...VE.....D.....N.....
SAMD9_Mylu  LM.E.NE...H...KS...A.T.....V--...S.F--G.E.D..K.....D.....C.....
SAMD9_Orcu  LV...K.D.....N...S.P.DG..A-----PGE.EP.P.T.TDN.ERGD...KL.AKEPS.R.H..NK.DEQW...H.I.....--
SAMD9_Rano  ---T.S...N.N.RAE..SCK.DT.V.PEGNSQRTAASPE...E.ND.V--AVQ-QDK.A.PGP.IA..N.....H.I.....
SAMD9_Crgr  ---T.I...P.N.R.E..T.K.DA.LR-----PE...AE.A.N.M--TEL-QGK.SPPGP..IA..N.....H.I.....
SAMD9_Capo  LM..G...R.SD..ISHK,-----E..PDS.M--NQP.D----VKQP.LP..NT.....H.I.....
SAMD9_Soar  L..S.NG.K..K..D..KS.TVDT.TTH-----V..S...VEN.F--D--Q.K.L.TEQ..IP.....D.....EN.V.....

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210     220     230     240     250     260     270     280     290     300
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Hosa  GNLIDPIHEFKAFNTATATEEDVKMKFSNEVFRFASACMNSRTNGTIHFGVKDKPKHGKIVGKVTNDTKEALINHFNLMINKYFEDHQVQQAKKCIREP
SAMD9_Patr  .....
SAMD9_Gogo  .....S.....
SAMD9_Poab  .....I.....S.....
SAMD9_Nole  .....S.....
SAMD9_Mamu  .....E.....V.....S.....
SAMD9_Bota  L.....E.G...A.....T...VEF.TI...D...HQ...K.N...
SAMD9_Susc  L.....E.K...A.....VE.TV...F.D.M.HQ...K.N...
SAMD9_Eqca  L.....ER.R...I.....V.STV...T.D...QQ...K...
SAMD9_Mylu  L.....E...KN.....VN.SV...D...HQ...K...
SAMD9_Orcu  -----L.....-Q...V.LAST.N..D.DE.P...E...S...V...
SAMD9_Rano  L...V...L..E...I.....Q..Q.R.MEL.TV.D.D...VQ..V...
SAMD9_Crgr  L...V...EK.S...I...I.....Q.R...VDLSTV.DT...DQ...A...
SAMD9_Capo  Q.....L.D...K.I...T.....M...SV...E.S.PQ...A...
SAMD9_Soar  L.....K.IEKG.K..I.I...K.....E.....I.VRFIAI...V..D...QI.HQ...EG...K.N...

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610      620      630      640      650      660      670      680      690      700
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Hosa WKDLLEARLIKHQDEISSQCISALSLEEINGTILKLSVTSQSSKRLLPISIGLSTVLLKKEEDIMTALEIICENECEGTLLKDKNKFLEFKASKEEDFYR
SAMD9_Patr .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Gogo .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Poab .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Nole .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Mamu .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|S
SAMD9_Bota .....TTQ..L.N.V.S.....F..S.....L..D.I..K.L..L.....
SAMD9_Susc .....A.QE..L.....F..V.S.....R.....L.....EK..L.....
SAMD9_Eqca .....T.Q..L.N.....L.F..S.....S..L.....K..D.T.....
SAMD9_Mylu .....T..L..S.....K.Q.F..S.....EM.....L.....K..N..L.....
SAMD9_Orcu .....T.E..L.N.....N.Q.....F..S.....Q.T..L..D..KD.K.....KA..
SAMD9_Rano .....V..SSQ..L..S.FS.N.A..L.....F..V.S.....R.E..L.....RE.LF..T..K..
SAMD9_Crgr .....AGQ..L.NRS..N.A..L..F..ST..-..L.....N.K.LF..TA..Q..
SAMD9_Capo .....TNE..L.DK..N.Q.....N..I..E..CS.....L.V.....H..T.LQ..T..
SAMD9_Soar .....KIQ..LAN..N.....V.K..S.....L..D.D..A..TL.....

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710      720      730      740      750      760      770      780      790      800
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Hosa GGKVSWWNFYFSSSESYSSPFVKRDKYERLEAMIQNCADSSKPTSTKIIHLYHHPGCGGTTLAMHILWELRKKFRCAVLKKNKTVDFSEIGEQVTSLITYGA
SAMD9_Patr .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Gogo .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|A
SAMD9_Poab .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Nole .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|A
SAMD9_Mamu .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|C.....D.....N.....
SAMD9_Bota .....T.....N.....K.E..RG..S.CV.....N.....T
SAMD9_Susc .....N.....ER.K.T.E.A..CV.....V.....M..C.....N.....T
SAMD9_Eqca .....K..L.....I.E..W..CV.....M.....AT.....
SAMD9_Mylu .....N.....K.R.H..S.CS.....K..N..T
SAMD9_Orcu .....NH.A.....W..ICA.....N.....T
SAMD9_Rano .....N.S.....VK.KK.EW..Q.VCA.....E.....N.....
SAMD9_Crgr .....N.S.....K.KK.EW..Q.VCA.....D.....E.....N.....
SAMD9_Capo .....-..Y..S.....K.KE..Y.P.LMCV.....V.....
SAMD9_Soar .....KN..A.....K.KD..W..S.CV..Q.....N.....K.I.D..T

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810      820      830      840      850      860      870      880      890      900
.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Hosa MNRQEYVPVLLLVDDFEEQDNVYLLQYSIQTAIAKKYIRYEKPLVILNCMRSONPEKSAR-IPDSIAVIOQLSPKEQRAFELKLEIKEQHKNFEDFYS
SAMD9_Patr .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|K..K-..L
SAMD9_Gogo .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
SAMD9_Poab .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|V
SAMD9_Nole .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|I..S.....K..-
SAMD9_Mamu .....|.....|.....|.....|.....|.....|.....|.....|.....|.....|D
SAMD9_Bota T.N..L.I.....A.H.V.NR.....R.....K-S..L.....ED..Q..
SAMD9_Susc ASS..L.....F.A..T.N..R.....K-N.N.L.N.S.....K.E..K..
SAMD9_Eqca T.Q..L.....E.....S..V.N.....C.K-NL.G.L.N.S.....F..E..E..K..
SAMD9_Mylu A.H..L.....GDI..A..TS.....V.....C.K-MS..L.S.....E
SAMD9_Orcu T.H..L.....F..S.....V.E.H.....K-..V.LLHH.....EK..KEYD..
SAMD9_Rano T.H..L.....T..V..H..T.....K-N..V.LV..D.....T..KH.V..
SAMD9_Crgr TS..L.....A..V.N.H..T.....K-..V.LVH..D.....KH.E..
SAMD9_Capo T.H..L.....AA..V.Q.....A.....K-..LR.K.R.KE.....H..
SAMD9_Soar TSH..L.....E.....S.H..VSS.H.....D.R.C.KNF.N..L.....S.....EK..V..

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910 920 930 940 950 960 970 980 990 1000
SAMD9_Hosa FMIMKTNFNKEYIENVVRNILKGNIFITKEAKLFSFLALLNSYVPDITISLSQCEKFLGIGNKKAFAWGTKEKFEDKMGTYSTILIKTEVIECGNYCGVRII
SAMD9_Patr
SAMD9_Gogo
SAMD9_Poab T
SAMD9_Nole M
SAMD9_Mamu R
SAMD9_Bota K D E S TS V
SAMD9_Susc D K C T L
SAMD9_Eqca EK S N T V R V K
SAMD9_Mylu D K S TT Y L V K
SAMD9_Orcu DPS N A L E R L M
SAMD9_Rano VT A AF L S Y S S
SAMD9_Crgr DRK VA A T YY S S S W
SAMD9_Capo KK KS SG Y A L Q K E T
SAMD9_Soar D M K C E Q T EL L D V C

1010 1020 1030 1040 1050 1060 1070 1080 1090 1100
SAMD9_Hosa HSLIAEFSLEELKKS YHLNKSQIMLDMLTENLFFDTGMGKSKFLQDMHTLLLTRHRDEHEGETGNWFS PFIEALHKDEGNEAVEAVLLES IHRFPNPAFI
SAMD9_Patr
SAMD9_Gogo H
SAMD9_Poab K S G R
SAMD9_Nole K D G K
SAMD9_Mamu K N G
SAMD9_Bota P IR I D D T Y I R E V Q Q N N M TL E V KN RGG R
SAMD9_Susc P TR I N D I Y I D E Q Q ND T R V KN G R Q S
SAMD9_Eqca P DR RT D YE L R SEHIQ Q N TL V KE G R S
SAMD9_Mylu P IR I D D W V Y I R F Q Q I T E K K G
SAMD9_Orcu P SL N G GRC M YE I V Q N D D KM EKG N K
SAMD9_Rano H TL R N S K VM Y I Y Q I Q N R D K H ATR D
SAMD9_Crgr HE SA R N S E VMN Y M I F Q Q N D KD ATR
SAMD9_Capo P IL D D Y L R F Q E S Q T KQ CQG E K
SAMD9_Soar P LR L Q R Y R T I IQ I Q N ET KE I GVD KQ

1110 1120 1130 1140 1150 1160 1170 1180 1190 1200
SAMD9_Hosa CQALARHFYIKKKDFGNALNWAQAKIIEPDNSYISDTLGOVYKSKIRWWIEENGGNGNISVDDLIALLDLAEHASSAFKESQQQSEDRYEYVKERLYPK
SAMD9_Patr
SAMD9_Gogo RS N
SAMD9_Poab D E R N L
SAMD9_Nole M ER N
SAMD9_Mamu R R N N Q Y Q
SAMD9_Bota T E DS H N K F MDD ER RS GE SD VQ N G F Q
SAMD9_Susc S ER NS H NE K -D R W A AD V N R F Q
SAMD9_Eqca L E SS K N K H D K R N TD E VE TN Q G F Q
SAMD9_Mylu ER TS H N N N T N ER R A TE V E YK D AM FNQ
SAMD9_Orcu R L D RGNT AN TD Q V AE R G Q
SAMD9_Rano L E ES L RK AN L V D IK I E TE K E D T G SV Q
SAMD9_Crgr L E K F RT N DD IR S AE TD S V D D R T G NQ
SAMD9_Capo V Y RE N L E K N DTER RD ST N R G GQ
SAMD9_Soar E ER E NK N Y DD R R A TM E V N R YK R A GKFHQ

1210 1220 1230 1240 1250 1260 1270 1280 1290 1300
SAMD9_Hosa SKRRYDTYNIAGYQGEIEVGLYTIQILQLIPFFDNKNELSKRYMVNFVSGSSDIPGDPNNEYKLALKNYIPYLTKLKFSLKKSFDFFDEYFVLLKPRNNI
SAMD9_Patr
SAMD9_GogoD.....
SAMD9_PoabD...I.....
SAMD9_NoleK...D...I.....
SAMD9_MamuD.....G...Q.D.Q.....
SAMD9_BotaT.L.....F.....D.I.I.K...EA..F.V.F.S.N.....
SAMD9_SuscD.I.I.TT.....F.V.N.F.....D.....
SAMD9_EqcaA.....S.....D.I.I...SS.F...F...N.C.RC...D.....
SAMD9_MyluA.....D.I.I.N.....F.....RS...D.....S..
SAMD9_OrcuKD...T...S.F.SV..F...N.R...D.....
SAMD9_RanoK.L.NS...RQV.I.I.NC...L-F.SV..F.S.N.QS...D.....
SAMD9_CrgrK.....D...D.I.I.NR...L-F.I..F...N.QS..RA...D.....
SAMD9_CapoS.H.....A.....K...R.D.I.I.N...L-F...F...T.S..DA...D.....
SAMD9_SoarS...F.KD.I.I.T...S...F...S.F.S.N.R...N...D.....M

1310 1320 1330 1340 1350 1360 1370 1380 1390 1400
SAMD9_Hosa KQNEEAKTRRKVAGYFKKYVDIFCLLEESQNNNTGLGSKFSEPLQVERCRRNLVALKADKDFSGLLEYLIKSOEDAISTMKCIVNEYTFLLQCTVKIQOSKE
SAMD9_Patr
SAMD9_GogoD.R.....S.....EY...R.....
SAMD9_PoabK-DP.....E..K...R.A.....
SAMD9_NoleI...VS...-KD.....SS.....A.V..EN..DK...S.....
SAMD9_MamuV...T...G..D-I...I...KS...ED..K.A...E...
SAMD9_BotaA...GPS.L.-KDF..L.V...LY..S.EV.....A..VH..ED.MDK...F...LI..
SAMD9_SuscK..V...A...GPS.D.S-KY...L.L...Q...S.EV.....N.K.A..ED.M.K.S.F...RML..
SAMD9_EqcaR...H.....GPSV...-KD..A.L.I...LY.KS.EV.....N..N...R.DD..K...F.G...P..
SAMD9_MyluQS.....A...GPF.L.-RD...QL.L.R..LY..S.EV.....I.N.ED.KK...F..A.R.Q..
SAMD9_OrcuT...TC..R.L...GPSA.I.LS-K...I.LS...QE...S.E...V...H...EN..HK...F..S.E...L..
SAMD9_Rano E.Y...S...M...E..GP.A.L.-QNFR..L.L...T.S.E...PK.TV.S.ED..K...AI...Q..
SAMD9_Crgr ..Y..S.C.S.V...R...S...-QNFR.LTL...I.T.E...PK.V.S.EG...Q.S...VI.T.Q..
SAMD9_Capo ..H.....VV...I...GPSG.L.-RD.EL.L.L...NQ.S.E...T.-.V.S.EY..T.I..FD..I.RMHL..
SAMD9_Soar ..SD--.....G...D.FNGT.S-KDF..NI.LS.KI.LF.SK.EV.....V.N.NSP.E..ES..EQ.S.I..H.AAS--T..

1410 1420 1430 1440 1450 1460 1470 1480 1490 1500
SAMD9_Hosa KLNFI LANIILSCIQPTSRVLVPEVKLKDQLREVLQPIGLTYQFSEPYFLASLLFWPENQQLDQHSEQMKEYAQAALKNSFKGQYKHMHRTKQPIAYFFLG
SAMD9_PatrK.....
SAMD9_GogoK.....Y.....
SAMD9_PoabK.....R.....K...S...E.....
SAMD9_NoleK.....R.....G...E.....
SAMD9_MamuK.T.....HR.....Q..A...E.....
SAMD9_Bota .Q.....Y.K...KI...IK.....L..QT.MS.RYP.....D.RL.EK..SS.E...R...Y..
SAMD9_Susc .Q.....Y.K...KI.M.IK..E...QAETICRQ.....D.K.EK.RS.E...R...C..
SAMD9_Eqca .Q.....Y.K...KI...IR.....Q...R.....H..D.K.EK.RS.E...R...Y..
SAMD9_Mylu .Q.....Y.K...KI.M.TK.....I..Q.PS.....K..D.K.EKH.RS.Q...R...Y..
SAMD9_Orcu .Q.....K...KS..TIK.....Q.I..QV..NCR.....D.K.EK..S.E...R...Y..
SAMD9_Rano .Q...S...N.I.KF..IK..E...I.....D.K.EK...EK..R...RLY.....
SAMD9_Crgr .Q.....N.A.K...K...E...I.....D.K.EK..W..ET..R...R.Y...E..
SAMD9_Capo .Q.....K.A.K...IK..EH..DI..QV.P.HR.....D.K.EK.V.S.EK.....
SAMD9_Soar .Q.....V.Y..K...KF.S..K...E...-V.TN.R.P.....T.N...D.K.EK..RL.ET..L.K.R..Y..

