



## Supplementary materials

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!Domain=Data:
#BatMRV1-IT2011      MDASLISEIR RIVLQLTQSN NGSIDKELKE IKKQVEINVT DIRNTNLRLD GIRGQVDGIS DSVAAIERRL GEVDGRLVAI [ 80]
#C/bovine/Indiana/MRV00304/2014 .....T..... ..E.....N .....IK.....T..... ..I..... ..V..... [ 80]
#T1/bovine/Maryland/Clone23/59 .....T..... ..N.....F..... ..E.....K..... ..AS..... ..V..... [ 80]
#Porcine_reovirus_SHR-A .....T..... ..S..... ..E.....D.....A .....K..... ..R.....T..... ..D.....V..... [ 80]
#MRV1_Lang .....K.....SV.S .....QS.....IE..... ..QV.....D .....AA.IK..... ..LGR.IAD.....N.IST.....S.....M.N.....G..... [ 80]
#MRV2_Jones .....SDLVQLIR.....E.L.LTGNGE SANSKH.IE..... ..IKDISA ..VNRIISNIV.....S.Q.....LG.L.....VR.S.....SGV.....S.NGN.IDRL..... [ 80]
#MRV3_Abney .....PR.RE.VV.....LIIA.....SD.....GI.LS.G.ES RVLSAL.KTSQ.....IHSD.....I.....IT.....QGLDDANKRI.....IALEQSRDD.....VASVSDAQLA..... [ 80]

#BatMRV1-IT2011      TNQLTQLSNS VGQNTQDISS MGNRLDAIEP RVDDDLTLTY NLAGRTSTLE ADVGGIRTEL SALTTRVTTE VARLDALISA [160]
#C/bovine/Indiana/MRV00304/2014 .....I..... ..S..... ..A.....D.....N.....V..... ..I..... ..S..... ..T.....V.....A..... ..D..... [160]
#T1/bovine/Maryland/Clone23/59 .....I..... ..S..... ..A.....D.....N.....V..... ..I..... ..S..... ..T.....A..... ..I..... .. [160]
#Porcine_reovirus_SHR-A .....I..... ..S..... ..A.....D.....N.....V..... ..IN..... ..S.....D.VR..... ..T.....A..... ..V..... [160]
#MRV1_Lang .....SS.V..... ..S..... ..S..... ..L.....D.....IN.V..... ..S..... ..V.....S..... ..T..... ..SL..... ..A..... ..T..... ..G.....NS [160]
#MRV2_Jones .....ERDVSGI.....A.....SGIDSRL.E.....L.D.VNVA.Q.....IQQ.....V.D..... ..LE.A.R.....TE.SA.TND.....GS.N..... ..LNDVRQT.A..... [160]
#MRV3_Abney .....ISR.ESSTGA LQTVVNGLD.....SVTQ.G.RVG QLETGLAELR VDHDLNVARV DTAERNIGS.....TTELSTL.LR.....TSIQ.DFES [160]

#BatMRV1-IT2011      GQTSLTGLSS RLDAEEAMV TTAGQGLRDK GNTLNIVGN GMWFNNNSQL QLDLSGQAKG VGFEGSGMVA KIDTNYFSYN [240]
#C/bovine/Indiana/MRV00304/2014 .....S.....S..... ..V.....V.....I..... ..N..... ..N..... ..V.....V..... [240]
#T1/bovine/Maryland/Clone23/59 .....A.....S..... ..V.....V.....I..... ..N..... ..N..... ..G.....V..... [240]
#Porcine_reovirus_SHR-A .....S.....SV..... ..V.....V.....I..... ..W..... ..NI..... ..R..... ..N..... ..I..... ..N..... [240]
#MRV1_Lang .....N.N.IGE.....T.....SNV.TS..... ..R..... ..Q.N..... ..S..... ..S..... ..V.....T.....V.....A..... [240]
#MRV2_Jones .....ID.R.....T.ET DAVTSVGQGL QKT.NSIRKI VG.GMWFDR.....NVLQLFVSNQ.....KG.GFIDN.....MVKIDTQYF.....SF.S.GNITL..... [240]
#MRV3_Abney .....RIST.ERTAV TSAG.PLSIR NNRMTMGLN..... ..L.....SGNNLA IRLPG.TGLN IQNGGL.FRF NTDQFQIVNN NITLKTTFVD [240]

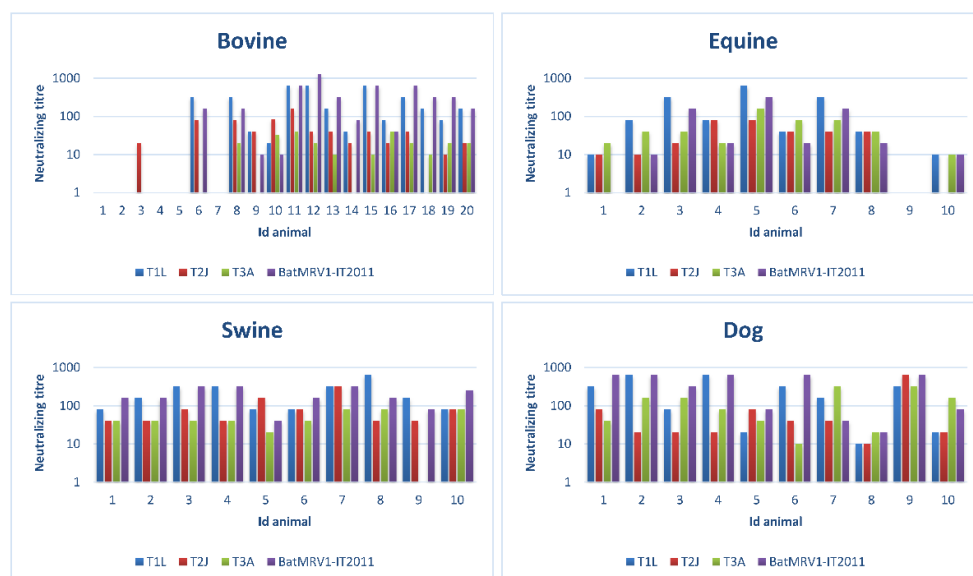
#BatMRV1-IT2011      SNGEITLVSQ INGLPARVSS LESLKIDTIL PPLTVREASG IRTLSLGYDT SDFTIINSVL ALRSRLTLEPT YRYPELDAS [320]
#C/bovine/Indiana/MRV00304/2014 .....N..... ..S..... ..T..... ..S..... ..A..... ..N..... ..M..... ..S..... ..T..... [320]
#T1/bovine/Maryland/Clone23/59 .....N..... ..S..... ..T..... ..S..... ..A..... ..N..... ..S..... ..S..... [320]
#Porcine_reovirus_SHR-A .....N..... ..S..... ..T..... ..S..... ..V..... ..A..... ..EI..... ..N..... ..T..... ..S.....AK..... [320]
#MRV1_Lang .....N..... ..E.....S.....T..... ..A..... ..SV..... ..V..... ..F..... ..S..... ..S..... [320]
#MRV2_Jones .....N.NISG.PAR TGS.E.SRID VVAPPLIVQS TGS.RLLRLM YEAVDFVVTN NVL.LR.RSV TPTFKFP.EL NSADNSVSIH [320]
#MRV3_Abney .....INSRIGATE QSYVASA.TP.....RLNSSTVK.....DM.IDSSTLE.....NSSGQLTVR.....TSPNLRYP.I.....DV.GGIGMS PN.RFRQSMW [320]

#BatMRV1-IT2011      NNRVQIAERF GMRTGSWTGQ LQYQHPQLSW QTSVTNLMK VDDWLVLFSFA QMTTNGIMAD GKVFVNFVSG LSSGWQGET [400]
#C/bovine/Indiana/MRV00304/2014 .....N..... ..AN..... ..T..... ..G..... ..T..... ..L..... [400]
#T1/bovine/Maryland/Clone23/59 .....N..... ..AN..... ..T..... ..S..... ..S..... ..L..... [400]
#Porcine_reovirus_SHR-A .....M..... ..N..... ..N..... ..T..... ..G..... ..T..... ..S..... [400]
#MRV1_Lang .....N..... ..V.....D..... ..T..... ..RAN..... ..L..... ..S..... ..S..... ..D..... [400]
#MRV2_Jones .....R.YRIRLGQW SQQLEYH.PS.....RWNA.VTVN LMR.DDW.II SFTFRFST.GI LASGKFVLMF VTGLSPGWAT G.TEPS.TTN [400]
#MRV3_Abney .....IGI.SYSGSG LNRVQVNSD IFIVDDYIHI CLPANGFESI A.GGDLSLNF VTGLLPPLLT.....DTEPA.HND VVTYGAQTV [400]

#BatMRV1-IT2011      QPSSTTDPLS TTFAAVQFLN ASGNRVDAFR IMGVSEWTDG ELEIKNYGGT YTGHTQVYWA PWTIMYPCNV R* [472]
#C/bovine/Indiana/MRV00304/2014 .....N..... ..V..... ..Y..... ..T..... ..V..... ..S..... [472]
#T1/bovine/Maryland/Clone23/59 .....N..... ..V..... ..Y..... ..G.....T..... ..I..... ..S..... [472]
#Porcine_reovirus_SHR-A .....N..... ..A.....V..... ..Y.....K..... ..I..... ..V..... [472]
#MRV1_Lang .....E..... ..I..... ..W..... ..N..... ..Q..... ..I..... [472]
#MRV2_Jones .....PL.T.FAAIQ FINGSSRVD FRIILG.AEWN AGELEITNY.....GTYTAHTNVD WAPM.IM.PC LG*----- [472]
#MRV3_Abney .....IGL.SGGAPQ YMSKNLWVEQ WQDGVRLRLV EG.G.ITHSN SKWPAMTVSY PRSF.*----- [472]

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**Figure S1.** Deduced amino acid sequences of the  $\sigma 1$  protein of BatMRV1-IT2011 and the strains T1/bovine/Maryland/Clone23/59, C/bovine/Indiana/MRV00304/2014T3D/55, Porcine\_reovirus\_SHR-A, MRV type 1 Lang, MRV type 2 Jones and MRV type 3 Abney.



**Figure S2.** Virusneutralization: presence of neutralizing antibodies against BatMRV1-IT2011, MRV Type 1 Lang, Type 2 Jones and Type 3 Abney in serum samples of different species.