

Figure S1. The original agarose gel images of Figure 1a. The highlighted region (red box) shows the GFP, GFP WT Rat MAVS, and GFP Rat MAVS Variant (MAVS500) expression vector from left to right, excluding the irrelevant band on the far right.

<p>a. 49.2% identity in 541 residues overlap; Score: 912.0; Gap frequency: 7.6%</p> <pre> WT_Human MAVS 1 MPFAEKTKYKIRINRHKCCVIVLLEILPYLPCILARQDRLRATCVLSGRNRTLNHLFN WT_Rat_MAVS 1 MTFAEKTKYKIRINRHKCCVIVLLEILPYLPCILTSDDRLRASYKQLNGOGLNELFN ***** WT_Human MAVS 61 TLQRRLPGWVEVFIARLRICELPLGLARQVTRVYGSYLFIKASLHSLPLQSPRIPTTVSEF WT_Rat_MAVS 61 TLQRRLPGWVEVFIARLRICELPLGLARQVTRVYGSYLFIKASLHSLPLQSPRIPTTVSEF ***** WT_Human MAVS 120 PTPAAHSIFYNSCREKEPSYMPVQETQAPESFGENSEQALQTLSPRAIPRNPDDGPLE WT_Rat_MAVS 121 SAFAAGHTIPDGGFQDK-PGYIKVQDTQPKSPVENSEEIPQA-NFGAIPRM-SCDGLI ***** WT_Human MAVS 180 SSSDLAALSPLTSSGHQDQTELGSTHTAGATSSLTSPRGVSPVSPVQFLARSTPRASR WT_Rat_MAVS 178 SSPNFPALSPQSRREHFGQEFILSGFSTANVDSVPIATYGVSPVSPVQFLARSTPRASR ***** WT_Human MAVS 240 LFGPTGEVSTQTSFSSSSPGLASAGAAEGKQAKSDQAEFIIIGSGAEPANSLPSKVP WT_Rat_MAVS 239 SFGVTVSALSARTLSSSSSTOSAFANGA-----GDQAKAATCVSTREG-----VP ***** WT_Human MAVS 300 TTLMEVNTVALKVFANDASVTVSKLETSSKEFGAVDSNALTNPADSKLPINSTRACMV WT_Rat_MAVS 283 TNSVPTSSVP---SISKPVVNTMSKLPISIKGTAATPSTVPTNIAPSKLPINSTRACMV ***** WT_Human MAVS 360 PRKVPFSMLTKVASTVFTKSSRN-KITPAAPPAAGATGSSANLNSHMRGLRGLL WT_Rat_MAVS 340 PRKVPASVA--KASASTMIFERNKQAKETLEAPATVTTGSSLTRDQISSESLHSGPEL ***** WT_Human MAVS 419 SKFCVLASQVDS-PFGCCFEDLLASASTSLGMCPCPCHEENEYKSEGTFCIHVAENPSIQ WT_Rat_MAVS 398 SKFCVLVSVQVNEPFSACMDLAISSPSTSLGSEPNHGPEENEYSS--FRIQVMSPSVD ***** WT_Human MAVS 478 LLEGNFGPPADPDGGRPQADRKFOEREVPCHEPSPGALMLQVANTGVLVITLLVLYRR WT_Rat_MAVS 455 LL-----GSPFLATQSPPEEPCASVSNAGWLG-ATSAALLAFLAVMLYRS ***** WT_Human MAVS 538 R WT_Rat_MAVS 503 R </pre>	<p>b. 99.6% identity in 507 residues overlap; Score: 2537.0; Gap frequency: 1.4%</p> <pre> WT_RAT MAVS 1 MTFAEKTKYKIRINRHKCCVIVLLEILPYLPCILTSDDRLRASYKQLNGOGLNELFN RAT_MAVS500 1 MTFAEKTKYKIRINRHKCCVIVLLEILPYLPCILTSDDRLRASYKQLNGOGLNELFN ***** WT_RAT MAVS 61 TLQRRLPGWVEVFIARLRICELPLGLARQVTRVYGSYLFIKASLHSLPLQSPRIPTTVSEF RAT_MAVS500 61 TLQRRLPGWVEVFIARLRICELPLGLARQVTRVYGSYLFIKASLHSLPLQSPRIPTTVSEF ***** WT_RAT MAVS 121 SAFAAGHTIPDGGFQDK-PGYIKVQDTQPKSPVENSEEIPQA-NFGAIPRM-SCDGLI RAT_MAVS500 114 SAFAAGHTIPDGGFQDK-PGYIKVQDTQPKSPVENSEEIPQA-NFGAIPRM-SCDGLI ***** WT_RAT MAVS 181 NPPALSPQSRREHFGQEFILSGFSTANVDSVPIATYGVSPVSPVQFLARSTPRASR RAT_MAVS500 174 NPPALSPQSRREHFGQEFILSGFSTANVDSVPIATYGVSPVSPVQFLARSTPRASR ***** WT_RAT MAVS 241 VVFGALSACITLSSSSSTGSAFAMAGDQAKAATCVSTREGVVNSVTTSEVSIKVPVFN RAT_MAVS500 234 VVFGALSACITLSSSSSTGSAFAMAGDQAKAATCVSTREGVVNSVTTSEVSIKVPVFN ***** WT_RAT MAVS 361 TMSKLPISIKGTAATPSTVPTNIAPSKLPINSTRACMV RAT_MAVS500 294 TMSKLPISIKGTAATPSTVPTNIAPSKLPINSTRACMV ***** WT_RAT MAVS 361 NQWAKETLEAPATVTTGSSLTRDQISSESLHSGPELRFQVLVQVQNEPFSACMDLA RAT_MAVS500 304 NQWAKETLEAPATVTTGSSLTRDQISSESLHSGPELRFQVLVQVQNEPFSACMDLA ***** WT_RAT MAVS 421 ISPSTSLGSEPNHGPEENEYSSFRIQVMSPSVD RAT_MAVS500 414 ISPSTSLGSEPNHGPEENEYSSFRIQVMSPSVD ***** WT_RAT MAVS 481 AKWLGATSAALLAFLAVMLYRSRLIAG RAT_MAVS500 474 AKWLGATSAALLAFLAVMLYRSRLIAG ***** </pre>
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Figure S2. Comparison of amino acid sequences using expasy.org database. **(a)** Residue overlaps between human WT MAVS and WT rat MAVS protein sequences. 7 amino acids in WT rat MAVS correspond to the missing region in MAVS500 highlighted yellow. **(b)** Residue overlap between WT rat MAVS and MAVS500 protein sequences. 7 amino acids in WT rat MAVS correspond to the missing region in MAVS500 (red frame). Positions where every residue is the same type (complete identity) are marked with an asterisk (*).

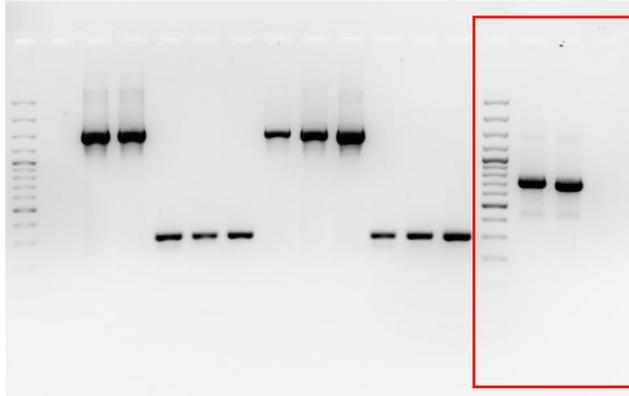


Figure S4. The original agarose gel images of Figure 2b. The highlighted region (red box) shows the 100 kb DNA ladder, PCR product from WT Rat MAVS, PCR product from Rat MAVS500, and the negative control, displayed from left to right. The DNA bands outside the red box, located on the left, are unrelated to the study and have no relevance to the analysis.

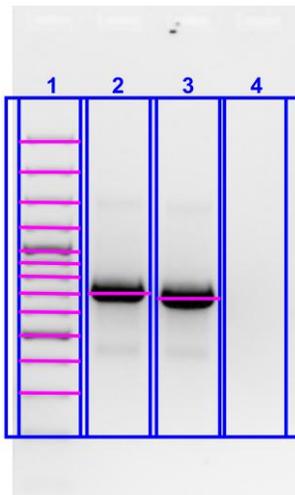


Figure S5. The original agarose gel images of Figure 2c.



Figure S7. The original WB images of Figure 4c. In the left blot image, the bands represent GFP. In the middle blot image, the band indicated by the red arrow represents MAVS. In the right blot image, the lower band corresponds to GAPDH. In Figure 4c, endogenous MAVS was detected with anti-MAVS. GFP-MAVS was detected with anti-GFP. Both anti-MAVS and anti-GFP results are shown together in the bottom panel for comparison.

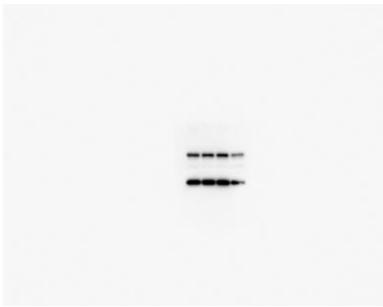


Figure S8. The original WB images of Figure 5a. In the blot image, the upper bands represent NFκB, while the lower bands correspond to GAPDH



Figure S9. The original WB images of Figure 5b. In both blot images, the upper bands represent pNFκB, while the lower bands correspond to GAPDH.

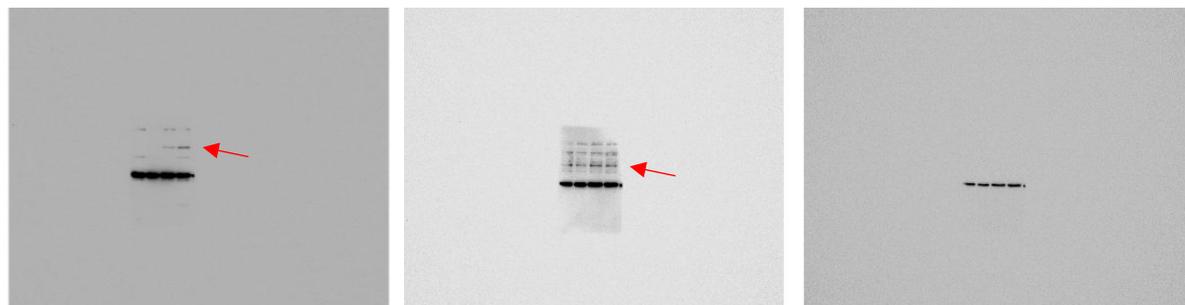


Figure S10. The original WB images of Figure 7a. In the left blot image, the band indicated by the red arrow represents Flag, and the lower bands correspond to GAPDH. In the middle blot image, the band indicated by the red arrow represents MAVS, and the lower bands correspond to GAPDH. In the right blot image, the bands represent GAPDH.

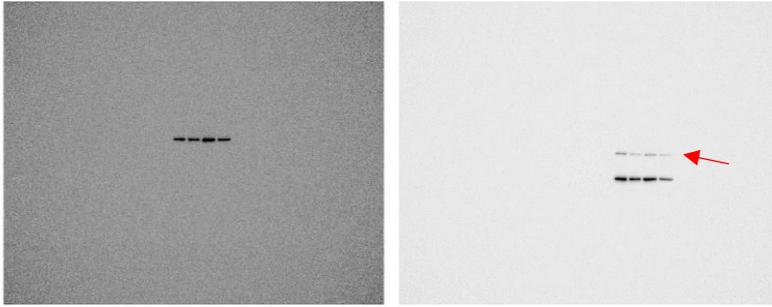


Figure S11. The original WB images of Figure 7d. In the left blot image, the bands represent NFκB. In the right blot image, the band indicated by the red arrow represents NFκB, and the lower band corresponds to GAPDH.

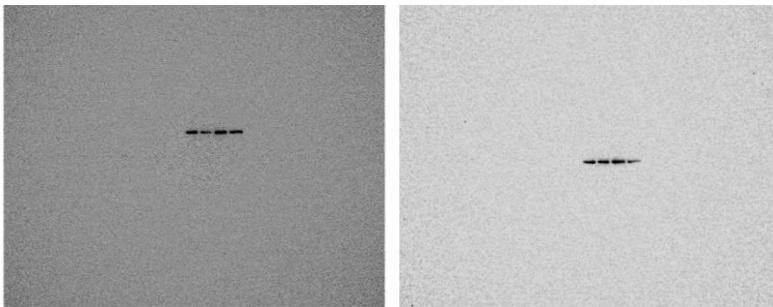


Figure S12. The original WB images of Figure 7f. In the left blot image, the bands represent p-NFκB. In the right blot image, the bands represent GAPDH.