

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.

a. 49.2% identity in 541 residues overlap; Score: 912.0; Gap frequency: 7.6%			b. 99.6% identity in 507 residues overlap; Score: 2537.0; Gap frequency: 1.4%		
WT_Human_MAVS	1	MPYAKDKTYKYICRNFSNFCNVIVVILIPYLPCITARDQDLRATCTLSGNNRUTLNHLFN	WT_RAT_MAVS	1	MTFAEKTYKYIRYNHRCOCVIVLSILPYLSCLTISDQQLRASYKQLGNQGLMELFN
WT_Rat_MAVS	1	MTFAEKTYKYIRYNHRCOCVIVLSILPYLSCLTISDQQLRASYKQLGNQGLMELFN	RAT_MAVS500	1	MTFAEKTYKYIRYNHRCOCVIVLSILPYLSCLTISDQQLRASYKQLGNQGLMELFN
*****			*****		
WT_Human_MAVS	61	TLQRPGWVEYFIRALRICEPLGLAQVTRVYQSYLFI	WT_RAT_MAVS	61	TLQRPGWVEYFIRALRICEPLGLAQVTRVYQSYLFI
WT_Rat_MAVS	61	TLQRPGWVEYFIRALRICEPLGLAQVTRVYQSYLFI	RAT_MAVS500	61	TLQRPGWVEYFIRALRICEPLGLAQVTRVYQSYLFI
*****			*****		
WT_Human_MAVS	120	PTFAAHSIFYNCREKEPSYMPVQETQAPESGENSEQALQTLSPRAIPRNPFGGPLE	WT_RAT_MAVS	121	SAFAAGHTIPGSGQDKPGYKPKVQDTQPKSPVENSEEPQANFGAIPRNGGGLISF
WT_Rat_MAVS	121	SAFAAGHTIPGSGQDKPGYKPKVQDTQPKSPVENSEEPQANFGAIPRNPFGGPLE	RAT_MAVS500	114	SAFAAGHTIPGSGQDKPGYKPKVQDTQPKSPVENSEEPQANFGAIPRNGGGLISF
*****			*****		
WT_Human_MAVS	180	SSDLAALSPLTSSGHQDQTLGSHTAGATSELTSGRGVSPVSPQPLARSTPRASR	WT_RAT_MAVS	181	NPTALSQPSRKHQPSLGGSTIANVDSPIATYGVSPVSPQPLARSTPRASR
WT_Rat_MAVS	178	SSPNFPALSPQSRKHQPSLGGSTIANVDSPIATYGVSPVSPQPLARSTPRASR	RAT_MAVS500	174	NPTALSQPSRKHQPSLGGSTIANVDSPIATYGVSPVSPQPLARSTPRASR
*****			*****		
WT_Human_MAVS	240	LPFGTGVSTVSTGTSFGSSSGLASGAGAGKQGAESDQAEFIICSSGARAIPANLPSKVP	WT_RAT_MAVS	241	VIVGALSACITLSSSTGSAFAMAGQAKAAICVSTKGVFINSVTSEVSIKIVPVN
WT_Rat_MAVS	239	SFGVTGALSARTLSSSTGSAFAMAGAGAGKQGAESDQAEFIICSSGARAIPANLPSKVP	RAT_MAVS500	234	VIVGALSACITLSSSTGSAFAMAGQAKAAICVSTKGVFINSVTSEVSIKIVPVN
*****			*****		
WT_Human_MAVS	300	TTLMEVNTVALKVTANDASVTSVSKLTSKKEGAVDSNALTNPADSKLPINSTRACMV	WT_RAT_MAVS	301	TMSKLPISIKSTAAITPSTVPTNIAISKLPINSVYTIIVSKVTSVAKASATMIFERN
WT_Rat_MAVS	283	TNSVTTSSVP---SIKPVFVNTMSKLPISIKSTAAITPSTVPTNIAISKLPINSVYTIIV	RAT_MAVS500	294	TMSKLPISIKSTAAITPSTVPTNIAISKLPINSVYTIIVSKVTSVAKASATMIFERN
*****			*****		
WT_Human_MAVS	360	PKGVPTSMVLTKVSGASTVPTKSSRN-KTPAAPTPAGATGSSANLNSHNNRLAPFL	WT_RAT_MAVS	361	NKQAKETLEAPATVITGSSLTRPDISRSRLISGPELSEKGVLVSVQVONETIACSMOLA
WT_Rat_MAVS	340	PKKVTAQA--KASASTMIFERNKQAKETLEAPATVITGSSLTRPDISRSRLISGPEL	RAT_MAVS500	354	NKQAKETLEAPATVITGSSLTRPDISRSRLISGPELSEKGVLVSVQVONETIACSMOLA
*****			*****		
WT_Human_MAVS	419	SKICVLASQVDS-PFGCFEDLAIASSTSLGMCPCRCPEENEYKSEGTFOIHAENPSIQ	WT_RAT_MAVS	421	ISPTSLAGSEPNHGEENEYSFRIVQKSPVSVLLGSEPLATQSPSEKPCASVSW
WT_Rat_MAVS	398	SKICVLVSQVDSNPFSAQMDLAIASSTSLGSEPNHGEENEYS--FRIQVSKSPSD	RAT_MAVS500	414	ISPTSLAGSEPNHGEENEYSFRIVQKSPVSVLLGSEPLATQSPSEKPCASVSW
*****			*****		
WT_Human_MAVS	478	LEEGNPGPADPDGGRPQADKPKQEREVPCHRPSPGALMLQVNTGVVTLVLYR	WT_RAT_MAVS	481	AKNLGATSAALLAATLAVMLYKSHLQ
WT_Rat_MAVS	455	LL-----GSPEPLATQSPSEKPCASVSWAKWLG-ATSALLAATLAVMLYR	RAT_MAVS500	474	AKNLGATSAALLAATLAVMLYKSHLQ
*****			*****		
WT_Human_MAVS	538	R	WT_RAT_MAVS	538	R
WT_Rat_MAVS	503	R	RAT_MAVS500	503	R

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 (*).

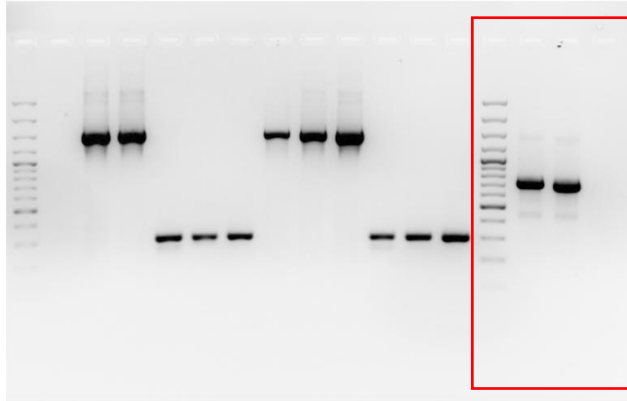


Figure S4. The original agarose gel images of Figure 2b. The highlighted region (red box) shows the 100 kb DNA ladder, PCR product from WT Rat MAVS, PCR product from Rat MAVS500, and the negative control, displayed from left to right. The DNA bands outside the red box, located on the left, are unrelated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

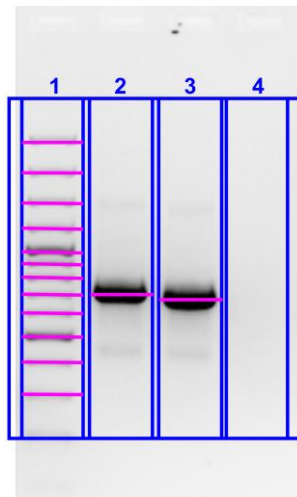


Figure S5. The original agarose gel images of Figure 2c.

Species	Accession	Gene	Protein	Position
sp Q72434 HUMAN	MAVS	MAVS	MAVS	1
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	1
sp Q66HG9 RAT	MAVS	MAVS	MAVS	1
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	1
sp Q72434 HUMAN	MAVS	MAVS	MAVS	119
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	120
sp Q66HG9 RAT	MAVS	MAVS	MAVS	120
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	113
sp Q72434 HUMAN	MAVS	MAVS	MAVS	179
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	177
sp Q66HG9 RAT	MAVS	MAVS	MAVS	177
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	170
sp Q72434 HUMAN	MAVS	MAVS	MAVS	239
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	237
sp Q66HG9 RAT	MAVS	MAVS	MAVS	237
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	230
sp Q72434 HUMAN	MAVS	MAVS	MAVS	298
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	285
sp Q66HG9 RAT	MAVS	MAVS	MAVS	288
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	281
sp Q72434 HUMAN	MAVS	MAVS	MAVS	358
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	335
sp Q66HG9 RAT	MAVS	MAVS	MAVS	338
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	331
sp Q72434 HUMAN	MAVS	MAVS	MAVS	417
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	393
sp Q66HG9 RAT	MAVS	MAVS	MAVS	396
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	388
sp Q72434 HUMAN	MAVS	MAVS	MAVS	476
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	449
sp Q66HG9 RAT	MAVS	MAVS	MAVS	453
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	446
sp Q72434 HUMAN	MAVS	MAVS	MAVS	536
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	497
sp Q66HG9 RAT	MAVS	MAVS	MAVS	501
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	494
sp Q72434 HUMAN	MAVS	MAVS	MAVS	540
sp Q8VCF0 MOUSE	MAVS	MAVS	MAVS	503
sp Q66HG9 RAT	MAVS	MAVS	MAVS	507
sp Q66HG9 RAT	MAVS500	MAVS	MAVS	500

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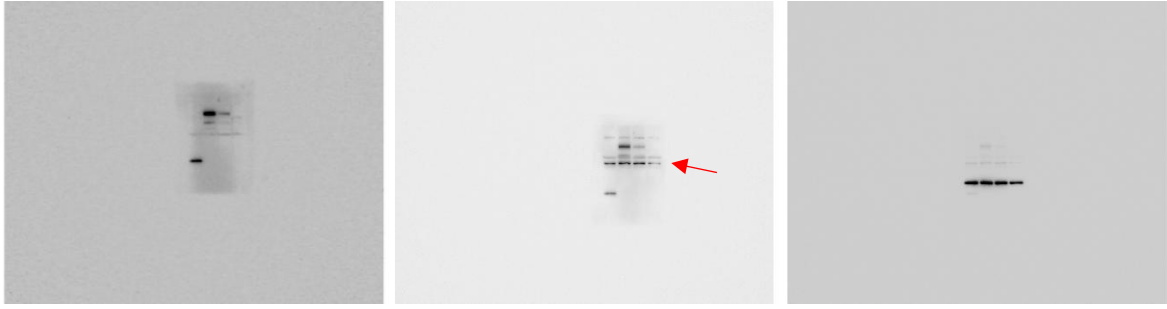


Figure S7. The original WB images of Figure 4c. In the left blot image, the bands represent GFP. In the middle blot image, the band indicated by the red arrow represents MAVS. In the right blot image, the lower band corresponds to GAPDH. In Figure 4c, endogenous MAVS was detected with anti-MAVS. GFP-MAVS 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.

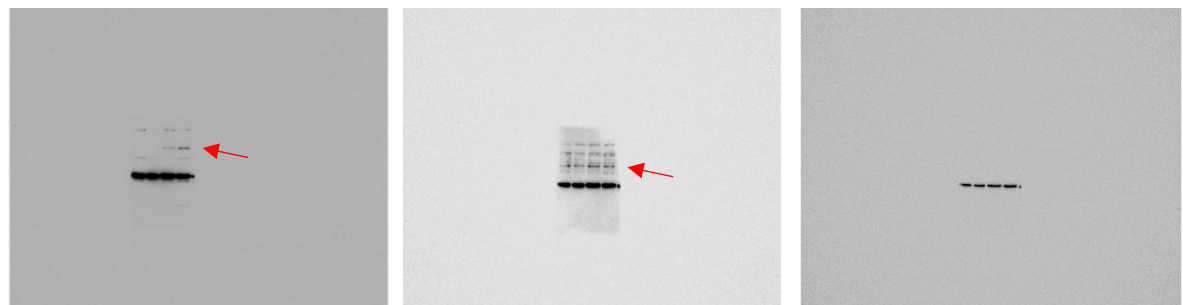


Figure S10. The original WB images of Figure 7a. In the left blot image, the band indicated by the red arrow represents Flag, and the lower bands correspond to GAPDH. In the middle blot image, the band indicated by the red arrow represents MAVS, and the lower bands correspond to GAPDH. In the right blot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

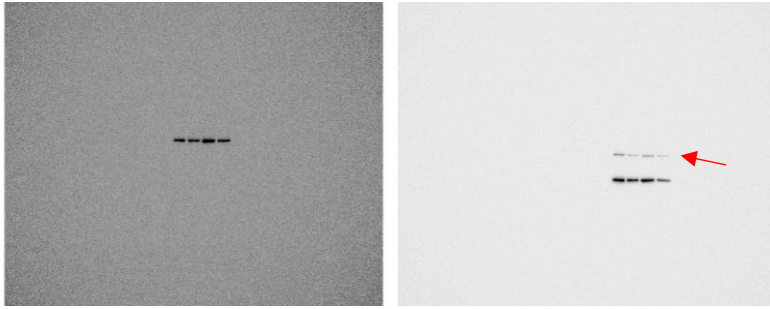


Figure S11. The original WB images of Figure 7d. In the left blot image, the bands represent NFκB. In the right blot image, the band indicated by the red arrow represents NFκB, and the lower band corresponds to GAPDH.

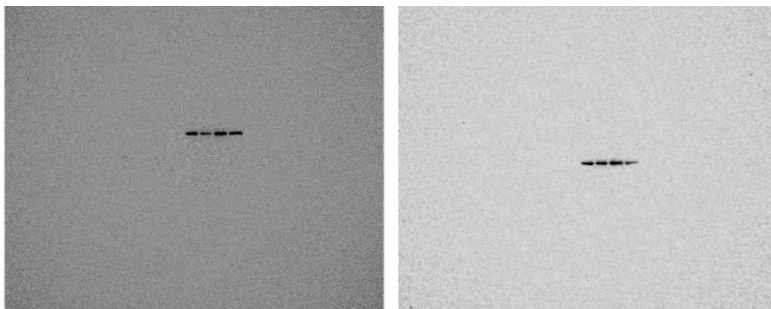


Figure S12. The original WB images of Figure 7f. In the left blot image, the bands represent p-NFκB. In the right blot image, the bands represent GAPDH.