

#### Supplementary Figure 1 | Characterization of six MAVS isoforms.

(a) Immunoblotting to show the migration position of Flag-tagged MAVS isoforms. HEK293T *Mavs*<sup>-/-</sup> cells were transfected with constructs expressing

Flag-tagged MAVS-M1/M2/M3/M4/M5/M6. Whole cell lysates were subjected to immunoblotting with anti-Flag, anti-MAVS-(C), anti-MAVS-(M) and anti-MAVS-(N) antibodies, respectively.

(b) Immunoblotting to show endogenous MAVS isoforms in various human cell lines with anti-MAVS-(M) and anti-MAVS-(N) antibodies. Samples were the same as those used in Fig. 1c.

(c) Reverse transcribed-PCR (RT-PCR) showing *Mavs* transcripts from various human cell lines. Total RNAs were extracted from HEK293T, HeLa, A549 and THP-1 cells. cDNA was prepared and subjected to RT-PCR using primers targeting *Mavs* mRNA 5'-UTR and 3'-UTR. GAPDH was analyzed as an internal control.

(d) Plasmids encoding Flag-tagged MAVS-M1/M2/M3/M4/M5/M6 and MAVS-ΔTM were transfected into HeLa cells respectively. Twenty-four hours after transfection, cells were uninfected or infected with Sendai virus. Fluorescent images were taken twelve hours after infection and immunofluorescence staining. Anti-Flag M2 (FITC) was used for immunofluorescence staining of Flag-tagged proteins. Mitochondria were stained with Mitrotracker Red. Nucleus was stained with DAPI. Scale bar represents 5 micrometers.



Supplementary Figure 2 | Expression level of MAVS isoforms and a series of N-terminally truncated MAVS (related to Fig. 2) in HEK 293T cells.

(a) Immunoblotting to show the protein levels of transiently expressed MAVS isoforms (M2-M6) and endogenous MAVS in HEK293T cells after Sendai virus infection as indicated in Fig. 2a.

(b) A diagram illustrating various truncated forms of MAVS, including deletions of N-terminal 100 aa, 200aa, 300aa, 400aa, 510aa (i.e., MAVS-TM), or C-terminal 30aa (i.e., MAVS-ΔTM).

(c) Immunoblotting to show the protein levels of transiently expressed N-terminally truncated MAVS and endogenous MAVS in HEK293T cells after Sendai virus infection as indicated in Fig. 2b.

(d) Transiently expressed N-terminally truncated MAVS isoforms inhibited endogenous MAVS aggregation under viral stimulation. pcDNA3-flag vector or pcDNA3-flag-MAVS-M2/M3/M4/M5/M6 was transfected into HEK293T cells respectively. The cells were infected with Sendai virus twenty-four hours after transfection. Cells were harvested twelve hours post virus infection, which were subjected to subcellular fractionation to get P5 and S5 fraction. P5 fractions were used to examine MAVS aggregation. Immunoblotting to show the protein levels of transiently expressed MAVS isoforms (M2-M6) and endogenous MAVS with anti-MAVS-(C) antibody.



## Supplementary Figure 3 | N-terminally truncated forms of MAVS inhibit full-length MAVS activity and aggregation through its TM domain.

(a, b) Experiments were performed as described in Fig. 3c and 3d respectively except that pcDNA3-flag-MAVS- $\Delta$ N141, pcDNA3-flag-MAVS- $\Delta$ N141-(VAMP-2 -TM) were transfected into HEK293T cells. To determine the endogenous MAVS protein level and avoid signal from overexpressed MAVS mutants, anti-MAVS-(N) antibody was used for immunoblotting. All data are presented as the mean values based on three independent experiments, and error bars indicate s.d. *P* values were determined by unpaired two-tailed Student's t-test. \*\*\**P*<0.001. N.S. indicates no statistically significant difference.

(c) A diagram showing the highly conservative amino acids in TM domains of

MAVS among various species. Sequences of MAVS TM domains from indicated species were subjected to alignment. Highly conservative amino acids were labeled with red character and indicated as arrows.



Supplementary Figure 4 | N-terminally truncated MAVS isoforms stabilized MAVS in *Mavs-(M2-6L)* cells.

(a) Immunoblotting of internal control Prohibitin to show the relative protein level of endogenous MAVS in various cell lines as indicated. Samples were the same as those used in Fig. 5a.

(b) HEK293T *Mavs-(M2-6L)* cells were transfected with empty vector or plasmids encoding MAVS TM domain and various N-terminally truncated isoforms as indicated. Transfection was performed as described in Fig. 5f. Whole cell lysates were obtained to determine the endogenous MAVS protein level by immunoblotting.



Supplementary Figure 5 | Infection with VSV changed the relative ratio of autophagy marker LC3-II/-I in various HEK293T cell lines as indicated. (a) HEK293T WT, *Mavs<sup>-/-</sup>* and *Mavs-(M2-6L)* cells were uninfected or infected with VSV (MOI=1). At twelve hours post infection, cells were untreated or treated with chloroquine (CQ) for four hours. Whole cell lysates were prepared for immunoblotting of autophagy marker LC3.

(b, c) As described in Fig. 6g, HEK293T *Mavs*<sup>-/-</sup> cells transfected with empty vector or plasmid expressing MAVS-(M2-6L) were infected with VSV (MOI=1).

At twelve hours post infection, VSV titers were quantitated by plaque assay (b). Fluorescent images were taken to examine VSV proliferation at eight hours after infection (c). Scale bar represents 10 micrometers. All data are presented as the mean values based on three independent experiments, and error bars indicate s.d.



#### Supplementary Figure 6 | mRNA and protein levels of Beclin 1 and ATG5

#### in HEK293T Mavs-(M2-6L) cells, related to Fig. 7.

(a) HEK293T Mavs-(M2-6L) cells were treated with shRNAs as described in

Fig. 7a. qPCR and immunoblotting to show the knock-down efficiency of Beclin 1 and ATG5 by indicated shRNAs at mRNA level and protein level respectively. All data are presented as the mean values based on three independent experiments, and error bars indicate s.d.

(b) Experiments were performed as described in Fig. 7b. ISG54 and CCL5 inductions were then measured by qPCR.

(c) Experiments were performed as described in Fig. 7c,d. Immunoblotting to show the protein levels of endogenous Beclin 1 and ATG5 as well as transiently expressed Flag-Beclin 1 and Flag-ATG5.



Supplementary Figure 7 | Characterization of HEK293T WT, *Mavs-(W56R), Mavs-(M2-6L), Mavs-(M2-6L&W56R)* cell lines (related to Figure 8a) and knock-down efficiency of shRNAs (related to Figure 8d). (a) As described in Fig. 7a, HEK293T WT, *Mavs-(W56R), Mavs-(M2-6L)* and *Mavs-(M2-6L&W56R)* cell lines were treated with shRNAs targeting Beclin 1 or

ATG5. RNA was extracted and qPCR was performed to measure IFN induction. All data are presented as the mean values based on three independent experiments, and error bars indicate s.d.

(b) HEK293T WT, *Mavs-(W56R)*, *Mavs-(M2-6L)* and *Mavs-(M2-6L&W56R)* cell lines were infected with VSV at MOI=1 for twelve hours. RNA was extracted from harvested cells and qPCR was performed to measure IFN induction. All data are presented as the mean values based on three independent experiments, and error bars indicate s.d.

(c) HEK293T WT, *Mavs-(W56R)*, *Mavs-(M2-6L)* and *Mavs-(M2-6L&W56R)* cell lines were transfected with plasmids encoding GFP-tagged LC3 or its loss-function mutant G120A as expression control. Fluorescent images were taken at thirty-six hours after transfection. Scale bar represents 5 micrometers.
(d) Immunoblotting to examine the knock-down efficiency of various shRNA oligoes targeting p62 or Nix used in Fig. 8d.

(e) As described in Fig. 8d, HEK293T *Mavs-(M2-6L)* cells were transfected with constructs encoding shRNA oligo1 and oligo2 targeting Nix. Whole cell lysates were prepared for immunoblotting to determine the endogenous MAVS and Nix protein level.

(f) qPCR to examine the knock-down efficiency of various shRNA oligoes targeting the indicated mitophagy related genes.

(g) Constructs encoding shRNAs targeting various mitophagy related genes were transfected into *Mavs-(M2-6L)* cells alone or in combination as indicated.

Transfection was performed as described in Fig. 8d. RNA was extracted from harvested cells and qPCR was performed to measure IFN induction. All data are presented as the mean values based on three independent experiments, and error bars indicate s.d.



Supplementary Figure 8 | Transiently expressed MAVS and mini-MAVS in HEK293T *Mavs*<sup>-/-</sup> cells induced mitophagy through ROS production.

(a) pcDNA3-HA-Nix was transfected into HEK293T *Mavs*<sup>-/-</sup> cells together with plasmids encoding Flag-tagged SUMO, mini-MAVS or mini-MAVS-(K0). Thirty-six hours after transfection, cells were harvested and subjected to immunoprecipitation.

(b) Empty vector, pcDNA3-flag-mini-MAVS or pcDNA3-flag-mini-MAVS (K0) were transfected into HEK293T *Mavs*<sup>-/-</sup> cells, together with plasmids encoding GFP-tagged LC3 or its loss-function mutant G120A as expression control. Fluorescent images were taken at thirty-six hours after transfection. Scale bar represents 5 micrometers.

(c) HEK293T *Mavs*<sup>-/-</sup> cells were transfected with empty vector, pcDNA3-flag-MAVS, pcDNA3-flag-MAVS-(W56R), pcDNA3-flag-mini-MAVS, or pcDNA3-flag-mini-MAVS-(W56R). Thirty-six hours after transfection, whole cell lysates were prepared for SDS-PAGE. Immunoblotting was performed using antibodies as indicated.

(d) As described in Fig. 8b, HEK293T *Mavs*<sup>-/-</sup> cells transfected with empty vector, pcDNA3-flag-MAVS, pcDNA3-flag-MAVS-(W56R), pcDNA3-flag-mini-MAVS, pcDNA3-flag-mini-MAVS-(W56R) and pcDNA3-HA-Nix were collected for FACS analysis to determine ROS production. Rotenone and CCCP treatment was analyzed as positive control. Histograms of FACS analysis are depicted. FACS gating strategy can be found in Supplementary Fig. 10.

(e) As described in Fig. 8g, HEK293T  $Mavs^{-2}$  cells transfected with pcDNA3-flag-MAVS or pcDNA3-flag-MAVS-(W56R) were untreated, treated with 1 µM rotenone, or cotransfected with constructs encoding sh-Nix as indicated. Whole cell lysates were prepared and subjected to immunoblotting.



Supplementary Figure 9 | Gating strategy for FACS data shown in Fig.

8b.

Cell lines stained with various dyes were gated according to their FSC (forward scatter) and SSC (sideward scatter), as well as green/red fluorescent features. (a) Mitotracker green; (b) Mitotracker red; (c) DCF.



# Supplementary Figure 10 | Gating strategy for FACS data shown in Supplementary Fig. 8d.

Transfected or treated HEK293T *Mavs*<sup>-/-</sup> cells were stained with DCF and gated according to their FSC (forward scatter) and SSC (sideward scatter), as well as green fluorescent features.

| Supp | plementary Figu | re 11       |                 |             |
|------|-----------------|-------------|-----------------|-------------|
| а    |                 | b           |                 |             |
|      | an              | ti-MAVS-(C) |                 | ti-MAVS-(C) |
|      | anti-Prohibitin |             | anti-Prohibitin |             |
| С    | -VSV            |             | +VSV            |             |
|      |                 |             |                 |             |
|      | anti-MAVS-(M)   |             | anti-MAVS-(M)   |             |
|      |                 |             |                 |             |
|      | anti-MAVS-(N)   |             | anti-MAVS-(N)   |             |
|      |                 |             |                 |             |
|      |                 |             |                 |             |
|      | anti-MAVS-(C)   | _           | anti-MAVS-(C)   |             |
|      |                 | -           |                 |             |
|      | anti-IRF3       |             | anti-IRF3       |             |

## Supplementary Figure 11 | Full blot images.

(a) For Fig. 1b. (b) For Fig. 1c. (c) For Fig. 1d.

| Supplementar<br>a | ry Figure 12            | b               |              |
|-------------------|-------------------------|-----------------|--------------|
|                   | SDD-AGE<br>anti-MAVS    |                 | anti-HA      |
|                   | Native Gel<br>anti-IRF3 |                 | anti-Flag    |
|                   | anti-MAVS               |                 | anti-HA      |
|                   | anti-Prohibitin         |                 | anti-Flag    |
|                   | anti-Flag               |                 | -            |
|                   | anti-Tubulin            |                 | anti-Tubulin |
| C                 |                         | anti-MAVS-(M)   |              |
|                   | anti-MAVS-(C)           |                 |              |
|                   | anti-MAVS-(N)           | anti-Prohibitin |              |

## Supplementary Figure 12 | Full blot images.

(a) For Fig. 2c. (b) For Fig. 3b. (c) For Fig. 4b.



#### Supplementary Figure 13 | Full blot images.

(a) For Fig. 5a. (b) For Fig. 6b. (c) For Fig. 7d. (d) For Fig. 8c.

## Supplementary Table 1 Sequence of primers for molecular cloning and TALEN-mediated gene editing or gene knockdown.

| Gene ID / Name     | Sequence (5' to 3')                  | Purpose    |
|--------------------|--------------------------------------|------------|
| MAVS-M1-For        | AAACTCGAGATGCCGTTTGCTGAAGACAAGACCT   |            |
| MAVS-M2-For        | AAACTCGAGATGCCTGTCCAGGAGACCCAGGCGC   |            |
| MAVS-M3-For        | AAACTCGAGATGCCTGTGAACACAGTGGCCCTGA   |            |
| MAVS-M4-For        | AAACTCGAGATGGTGCCATCCAAAGTGCCTACTAG  |            |
| MAVS-M5-For        | AAACTCGAGATGGTGCTCACCAAGGTGTCTG      |            |
| MAVS-M6-For        | AAACTCGAGATGGGGCCCTGCCATGGCCCAGA     | Destain    |
| MAVS-ΔN100-For     | AAACTCGAGGACCGTCCCCCAGACCCACTG       | Protein    |
| MAVS-ΔN200-For     | AAACTCGAGGAACTGGGCAGTACCCACAC        | expression |
| MAVS-ΔN300-For     | AAACTCGAGACCTTGATGCCTGTGAACAC        |            |
| MAVS-ΔN400-For     | AAACTCGAGAGCTCAGCCTGGCTAGACAG        |            |
| MAVS-TM-For        | AAACTCGAGCCCTCACCTGGGGCTCTGTG        |            |
| MAVS-Rev           | AAATCTAGACTAGTGCAGACGCCGCCGGTAC      |            |
| MAVS-ΔTM-For       | AAACTCGAGATGCCGTTTGCTGAAGACAAGAC     |            |
| MAVS-ΔTM-Rev       | AAATCTAGATTACCTGTGGCATGGCACCTCCC     |            |
| Bcl-xL-TM-Rev-For1 | GGGAGGTGCCATGCCACAGGGAGAGTCGAAAGGGC  |            |
|                    | CAGG                                 |            |
| Bcl-xL-TM-Rev-For2 | AAACTCGAGGAGAGTCGAAAGGGCCAGG         |            |
| Bcl-xL-TM-Rev      | AAATCTAGATCATTTCCGACTGAAGAGTG        |            |
| VAMP-2-TM-For1     | GGGAGGTGCCATGCCACAGGGCTCAAGCGCAAATA  |            |
|                    | СТБСТС                               |            |
| VAMP-2-TM-For2     | AAACTCGAGGCTCAAGCGCAAATACTGGTG       |            |
| VAMP-2-TM-Rev      | AAATCTAGATTAAGAGCTGAAGTAAACTATG      |            |
| Pex13-TM-For       | AAACTCGAGATTGAGCATGCATTTGCCTCTGACA   |            |
| Pex13-TM-Rev       | AAATCTAGATTAAGATTTTGCTGAGGTAGCTGCT   |            |
| MAVS-M1-For        | CCCAAGCTTATGCCGTTTGCTGAAGACAAGAC     |            |
| MAVS-M2L-For       | CCCTGCCTGTCCAGGAGACCCAGGCGCCAGAGTCC  |            |
|                    | CCAGGAGAGA                           |            |
| MAVS-M2L-Rev       | GGTCTCCTGGACAGGCAGGGGGTAACTTGGCTCCT  |            |
|                    | TCTCTCTGCA                           |            |
| MAVS-M3L-For       | CCACCTTGCTGCCTGTGAACACAGTGGCCCTGAAAG |            |
|                    | TGCCTGCC                             |            |
| MAVS-M3L-Rev       | GTTCACAGGCAGCAAGGTGGTAGGCACTTTGGAGG  |            |
|                    | GCAGAGAG                             |            |
| MAVS-M4, 5L-For    | GCCTGGTGCCATCCAAAGTGCCTACTAGCCTGGTGC |            |
|                    | TCACCAAGGTGTCTGCCAG                  |            |
| MAVS-M4, 5L-Rev    | CCAGGCTAGTAGGCACTTTGGATGGCACCAGGCCA  |            |
|                    | GCACGGGTTGAGTTGATG                   |            |
| MAVS-M6L-For       | GGCCTGGGGCCCTGCCATGGCCCAGAGGAGAATGA  |            |
|                    | GTATAAGT                             |            |
| MAVS-M6L-Rev       | CCATGGCAGGGCCCCAGGCCCAAGGAGGTGCTGGC  |            |

|                         | ACTGATGGCAAGA                          |
|-------------------------|--|
| MAVS-TM-A521W-For       | GGGCTCTGTGGCTCCAGGTGTGGGTGACAGGGGTG    |
|                         | CTGGTAGTC                              |
| MAVS-TM-A521W-Rev       | CCACACCTGGAGCCACAGAGC                  |
| MAVS-TM-G524W-For       | GGCTCCAGGTGGCTGTGACATGGGTGCTGGTAGTC    |
|                         | ACACTCCTGG                             |
| MAVS-TM-G524W-Rev       | CCATGTCACAGCCACCTGGAG                  |
| MAVS-TM-L530W-For       | CAGGGGTGCTGGTAGTCACATGGCTGGTGGTGCTG    |
|                         | TACCGGCG                               |
| MAVS-TM-L530W-Rev       | CCATGTGACTACCAGCACCCC                  |
| MAVS-TM-L534W-For       | GGTAGTCACACTCCTGGTGGTGTGGTACCGGCGGC    |
|                         | GTCTGCACTAG                            |
| MAVS-TM-L534W-Rev       | CCACACCACCAGGAGTGTGACTAC               |
| MAVS-W56R-For           | CCGGCATCTCTTCAATACCCTTCAGCGGCGGCCCGG   |
|                         | СТӨӨӨТ                                 |
| MAVS-W56-Rev            | GAAGGGTATTGAAGAGATGCCGGAGGGTGTCCCGG    |
|                         | TTCCCTGAGA                             |
| Beclin 1-For            | AAAGGATCCATGGAAGGGTCTAAGACGTCCAAC      |
| Beclin 1-Rev            | TATGCGGCCGCTCATTTGTTATAAAATTGTGAGGACA  |
|                         | ссс                                    |
| Beclin 1-Resistant-For1 | AACTCTGGAGAAGAGCCTTTTATTGAAACTCCTCGCC  |
|                         | AGGATGGTG                              |
| Beclin 1-Resistant-Rev1 | AATAAAAGGCTCTTCTCCAGAGTTAGTCTCTTCCTCC  |
|                         | TGGGTCTCTCCT                           |
| Beclin 1-Resistant-For2 | AAGATCGAGGATACTGGTGGCAGTGGCGGCTCCTAT   |
|                         | ТССАТСААА                              |
| Beclin 1-Resistant-Rev2 | CACTGCCACCAGTATCCTCGATCTTGCCTTTCTCCAC  |
|                         | ATCCATCCTG                             |
| ATG5-For                | AAACTCGAGATGACAGATGACAAAGATGTGCTTCG    |
| ATG5-Rev                | AAATCTAGATCAATCTGTTGGCTGTGGGATGATA     |
| ATG5-Resistant-For1     | AACACCTTAGCTATCCGGACAATTTTCTTCATATTAGT |
|                         | ATCATCCCACAGCCA                        |
| ATG5-Resistant-Rev1     | AAATTGTCCGGATAGCTAAGGTGTTCACTCAGCCACT  |
|                         | GCAGAGGTGTTT                           |
| ATG5-Resistant-For2     | CACAAGCAGCTGTGGATGGGTTTGCAAAATGACAGA   |
|                         | TTTGACCAGT                             |
| ATG5-Resistant-Rev2     | TTTGCAAACCCATCCACAGCTGCTTGTGATCTTTTT   |
|                         | CTGCATTTCA                             |
| P62-For                 | AAACTCGAGATGGCGTCGCTCACCGTGAAGGCC      |
| P62-Rev                 | AAATCTAGATTACAACGGCGGGGGGATGCTTTGAATAC |
| Nix-For                 | AAACTCGAGATGTCGTCCCACCTAGTCGAGCC       |
| Nix-Rev                 | AAATCTAGATTAGTAGGTGCTGGCAGAGGGTGTGC    |
| NDP52-For               | TTTGGATCCATGGAGGAGACCATCAAAGATC        |

| NDP52-Rev                | TTTGCGGCCGCTTAGAGAGAGTGGCAGAACACG    |               |
|--------------------------|--------------------------------------|---------------|
| OPTN-For                 | AAACTCGAGATGTCCCATCAACCTCTCAGCTGC    |               |
| OPTN-Rev                 | AAATCTAGATTAAATGATGCAATCCATCACGTG    |               |
| TAX1BP1-For              | TTTGGATCCATGACATCCTTTCAAGAAGTCC      |               |
| TAX1BP1-Rev              | TTTGCGGCCGCTTAGTCAAAATTTAGAACATTCTG  |               |
| NBR1-For                 | AAACTCGAGATGGAACCACAGGTTACTCTAAATG   |               |
| NBR1-Rev                 | AAATCTAGATTAGAACCAGGAGAATGCTTCAC     |               |
| Mavs-M2L-TALEN Left arm  | ACAACAGCTGCAGAGAGAA                  |               |
| Mavs-M2L-TALEN Right arm | GGGTCTCCTGGACAGGCAT                  |               |
| Mavs-M2L-HR-For1         | ACCTCCTAATCCACCTGCCT                 |               |
| Mavs-M2L-HR-Rev1         | ATTCCCAGACCCTCTGTCCA                 |               |
| Mavs-M2L-HR-For2         | CCTGGACAGGCAGTGGGTAACTTGGCTCCTTCTC   |               |
| Mavs-M2L-HR-Rev2         | GTTACCCACTGCCTGTCCAGGAGACCCA         |               |
| Mavs-M6L-TALEN Left arm  | CAGTGCCAGCACCTCCT                    |               |
| Mavs-M6L-TALEN Right arm | CATTCTCCTCTGGGCCAT                   |               |
| Mavs-M6L-HR-For1         | GGTACCTTCAAAAGTGCCTACTAGTCTGGTGCTCAC | TALEN-medi    |
| Mavs-M6L-HR-Rev1         | TCTGCCTCTAAAGGAGTAGCCAAGA            | ated          |
| Mavs-M6L-HR-For2         | CAGCACCTCCTTAGGACTGGGGCCCTG          | knock-in cell |
| Mavs-M6L-HR-Rev2         | CAGTCCTAAGGAGGTGCTGGCA               | line          |
| Mavs-M3-5L-TALEN Left    | GCCTGCCAACCCAGCATCT                  |               |
| arm                      |                                      |               |
| Mavs-M3-5L-TALEN Right   | TTGAGCTAGTTGGCAACTT                  |               |
| arm                      |                                      |               |
| Mavs-M3-5L-HR-For1       | ATGTGCATTCCGAGTTCCGT                 |               |
| Mavs-M3-5L-HR-Rev1       | AGCCTCCACAATCCCCAAGAAA               |               |
| Mavs-M3-5L-HR-For2       | CCTACCACCTTGCTGCCTGTGAACACAGTG       |               |
| Mavs-M3-5L-HR-Rev2       | GTTCACAGGCAGCAAGGTGGTAGGCACTTT       |               |
| Mavs-M3-5L-HR-For2       | GGTACCTTCAAAAGTGCCTACTAGTCTGGTGCTCAC |               |
| Mavs-M3-5L-HR-Rev2       | TAGTAGGCACTTTTGAAGGTACCAGGCCAGCACGG  |               |
| Mavs-W56R-TALEN Left     | CGGCGGCCCGGCTGGGT                    |               |
| arm                      |                                      |               |
| Mavs-W56R-TALEN Right    | GCTCACAGCCCCTCAGT                    |               |
| arm                      |                                      |               |
| Mavs-W56R-HR-For         | CAGCTTCCTTGTTTGTTATTGTCGG            |               |
| Mavs-W56R-HR-Rev         | TCAAACTCAATCTCATCAAATCGCC            |               |
| si-MAVS-sense            | CCACCUUGAUGCCUGUGAA                  |               |
| si-MAVS-antisense        | UUCACAGGCAUCAAGGUGG                  |               |
| sh-Beclin 1 (1)-For      | CCGGAACTCAGGAGAGGAGCCATTTCTCGAGAAATG |               |
|                          | GCTCCTCTCGAGTTTTTTG                  | siRNA and     |
| sh-Beclin 1 (1)-Rev      | AATTCAAAAAAACTCAGGAGAGGAGCCATTTCTCGA | shRNA         |
|                          | GAAATGGCTCCTCTCCTGAGTT               | oligoes       |
| sh-Beclin 1 (2)-For      | CCGGAAGATTGAAGACACAGGAGGCCTCGAGGCCT  |               |
|                          | CCTGTGTCTTCAATCTTTTTTG               |               |

| sh-Beclin 1 (2)-Rev | AATTCAAAAAAAGATTGAAGACACAGGAGGCCTCGA  |  |
|---------------------|---------------------------------------|--|
|                     | GGCCTCCTGTGTCTTCAATCTT                |  |
| sh-ATG5 (1)-For     | CCGGAAGCAACTCTGGATGGGATTGCTCGAGCAATC  |  |
|                     | CCATCCAGAGTTGCTTTTTTG                 |  |
| sh-ATG5 (1)-Rev     | AATTCAAAAAAAGCAACTCTGGATGGGATTGCTCGA  |  |
|                     | GCAATCCCATCCAGAGTTGCTT                |  |
| sh-ATG5 (2)-For     | CCGGAACATCTGAGCTACCCGGATACTCGAGTATCC  |  |
|                     | GGGTAGCTCAGATGTTTTTTTG                |  |
| sh-ATG5 (2)-Rev     | AATTCAAAAAAACATCTGAGCTACCCGGATACTCGAG |  |
|                     | TATCCGGGTAGCTCAGATGTT                 |  |
| sh-Ctr-For          | CCGGAATTCTCCGAACGTGTCACGTCTCGAGACGTG  |  |
|                     | ACACGTTCGGAGAATTTTTTTG                |  |
| sh-Ctr-Rev          | AATTCAAAAAAATTCTCCGAACGTGTCACGTCTCGAG |  |
|                     | ACGTGACACGTTCGGAGAATT                 |  |
| sh-P62 (1)-For      | CCGGAAGGATGACATCTTCCGAATCCTCGAGGATTC  |  |
|                     | GGAAGATGTCATCCTTTTTTG                 |  |
| sh-P62 (1)-Rev      | AATTCAAAAAAAGGATGACATCTTCCGAATCCTCGAG |  |
|                     | GATTCGGAAGATGTCATCCTT                 |  |
| sh-P62 (2)-For      | CCGGAACAGATGGAGTCGGATAACTCTCGAGAGTTA  |  |
|                     | TCCGACTCCATCTGTTTTTTG                 |  |
| sh-P62(2)-Rev       | AATTCAAAAAAACAGATGGAGTCGGATAACTCTCGAG |  |
|                     | AGTTATCCGACTCCATCTGTT                 |  |
| sh-Nix (1)-For      | CCGGAAGACATGGAGAAGATTCTTTCTCGAGAAAGA  |  |
|                     | ATCTTCTCCATGTCTTTTTTG                 |  |
| sh-Nix (1)-Rev      | AATTCAAAAAAAGACATGGAGAAGATTCTTTCTCGAG |  |
|                     | AAAGAATCTTCTCCATGTCTT                 |  |
| sh-Nix (2)-For      | CCGGAAGTCGAGGCTTTGAAGAAAACTCGAGTTTTC  |  |
|                     | TTCAAAGCCTCGACTTTTTTTG                |  |
| sh-Nix (2)-Rev      | AATTCAAAAAAAGTCGAGGCTTTGAAGAAAACTCGA  |  |
|                     | GTTTTCTTCAAAGCCTCGACTT                |  |
| sh-PINK1-For        | CCGGAAGCCATCTTGAACACAATGACTCGAGTCATT  |  |
|                     | GTGTTCAAGATGGCTTTTTTTG                |  |
| sh-PINK1-Rev        | AATTCAAAAAAAGCCATCTTGAACACAATGACTCGAG |  |
|                     | TCATTGTGTTCAAGATGGCTT                 |  |
| sh-Parkin-For       | CCGGAAGGAGGTGGTTGCTAAGCGACTCGAGTCGC   |  |
|                     | TTAGCAACCACCTCCTTTTTTG                |  |
| sh-Parkin-Rev       | AATTCAAAAAAAGGAGGTGGTTGCTAAGCGACTCGA  |  |
|                     | GTCGCTTAGCAACCACCTCCTT                |  |
| sh-MUL1-For         | CCGGAAGGAGCTGTGCGGTCTGTTACTCGAGTAACA  |  |
|                     | GACCGCACAGCTCCTTTTTTG                 |  |
| sh-MUL1-Rev         | AATTCAAAAAAAGGAGCTGTGCGGTCTGTTACTCGA  |  |
|                     | GTAACAGACCGCACAGCTCCTT                |  |
| Mavs-5'-UTR-For     | GGTACCCGAGTCTCGTTTCC                  |  |

| Mavs-3'-UTR-For | AGCCAAGGCATGTCCTGCT     |         |
|-----------------|-------------------------|---------|
| IFN-β-For       | CAGCAGTTCCAGAAGGAGGA    |         |
| IFN-β-Rev       | AGCCAGGAGGTTCTCAACAA    |         |
| GAPDH-For       | AGAAGGCTGGGGCTCATTTG    |         |
| GAPDH-Rev       | AGGGGCCATCCACAGTCTTC    | qRT-PCR |
| CXCL10-For      | TGGCATTCAAGGAGTACCTC    |         |
| CXCL10-Rev      | TTGTAGCAATGATCTCAACACG  |         |
| ISG54-For       | CTGAACCGAGCCCTGCCGAAC   |         |
| ISG54-Rev       | GCTGCCTCGTTTTGCCCTTTGAG |         |
| CCL5-For        | ATCCTCATTGCTACTGCCCTC   |         |
| CCL5-Rev        | GCCACTGGTGTAGAAATACTCC  |         |
| qBeclin 1-For   | TGTCACCATCCAGGAACTCA    |         |
| qBeclin 1-Rev   | CCTGGCGAGGAGTTTCAATA    |         |
| qATG5-For       | GCTATTGATCCTGAAGATGGG   |         |
| qAtg5-Rev       | GATGTTCACTCAGCCACTG     |         |
| qNix-For        | CCGCCCTGCACAACAACAAC    |         |
| qNix-Rev        | GCCTCTGGAACTACTCTGTCC   |         |
| qPINK1-For      | CGGCCTGCAGCTGGGTCGAGC   |         |
| qPINK1-Rev      | GCCCGCACCACGAACTGCCG    |         |
| qParkin-For     | GGGTTCCGGCTGACCAGTTGC   |         |
| qParkin-Rev     | GCAGAATGACAGCCAGCCCC    |         |
| qMUL1-For       | CACCGCCGCCCTGTACTCCG    |         |
| qMUL1-Rev       | TCCTGAAGTGTCAGCCGCTG    |         |