Supplementary Materials for

Multifaceted activation of STING axis upon Nipah and Measles virus-induced syncytia formation

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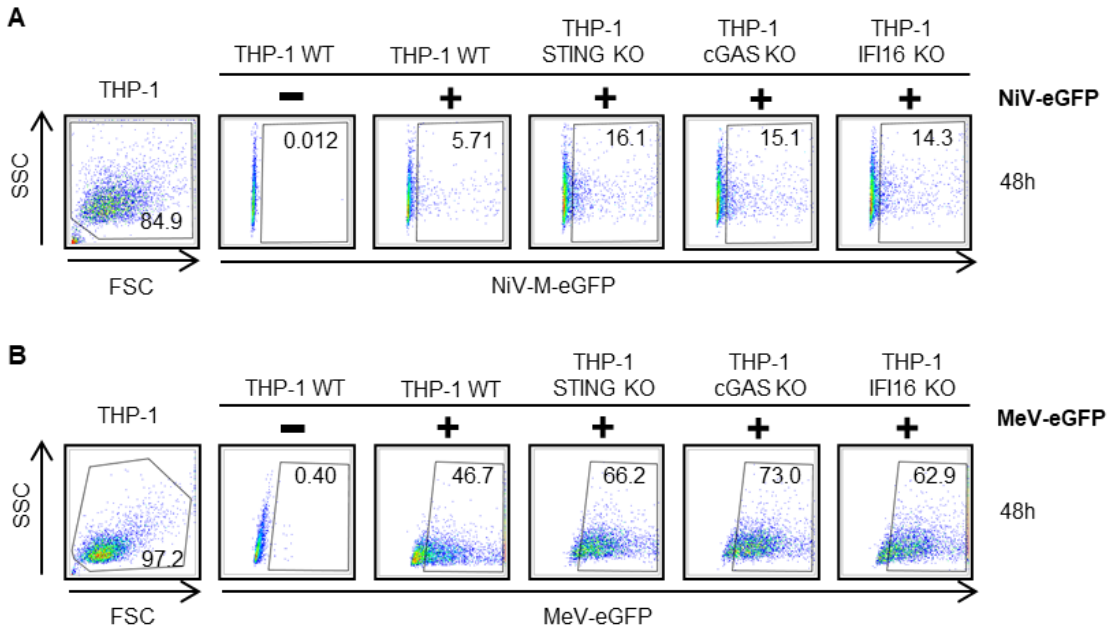
This PDF file includes:

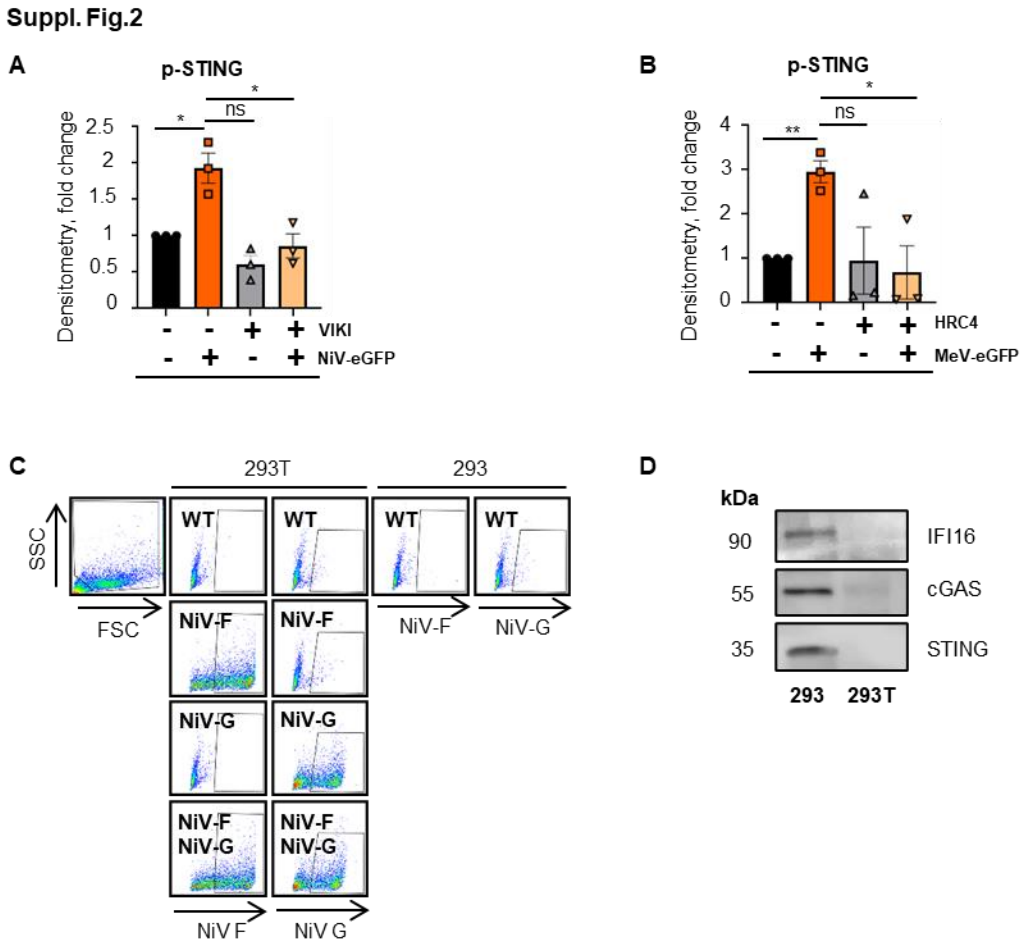
Figs. S1 to S4

Fig. S1.



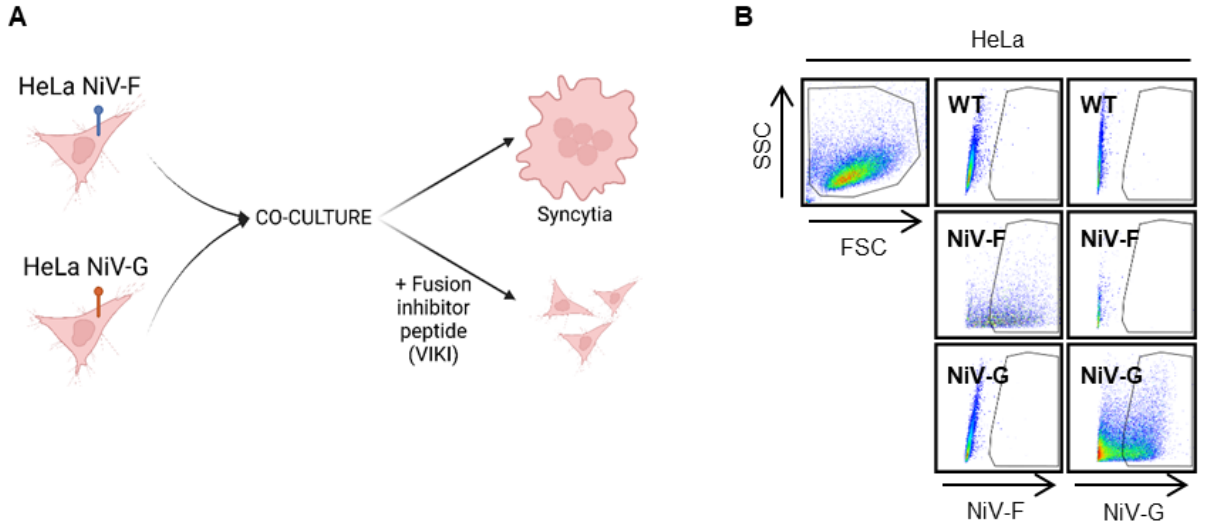
STING-associated sensors cGAS and IFI16 are involved in the control of MeV infection. WT, STING KO, cGAS KO or IFI16 KO THP-1 cells were infected with NiV-eGFP at a MOI of 0.3 (A) or MeV-eGFP at a MOI of 0.1 (B) for 48h. **(A-B)** eGFP expression was evaluated by fluorescence microscopy in NiV-eGFP (A) or MeV-eGFP (B) infected cells.

Fig. S2.



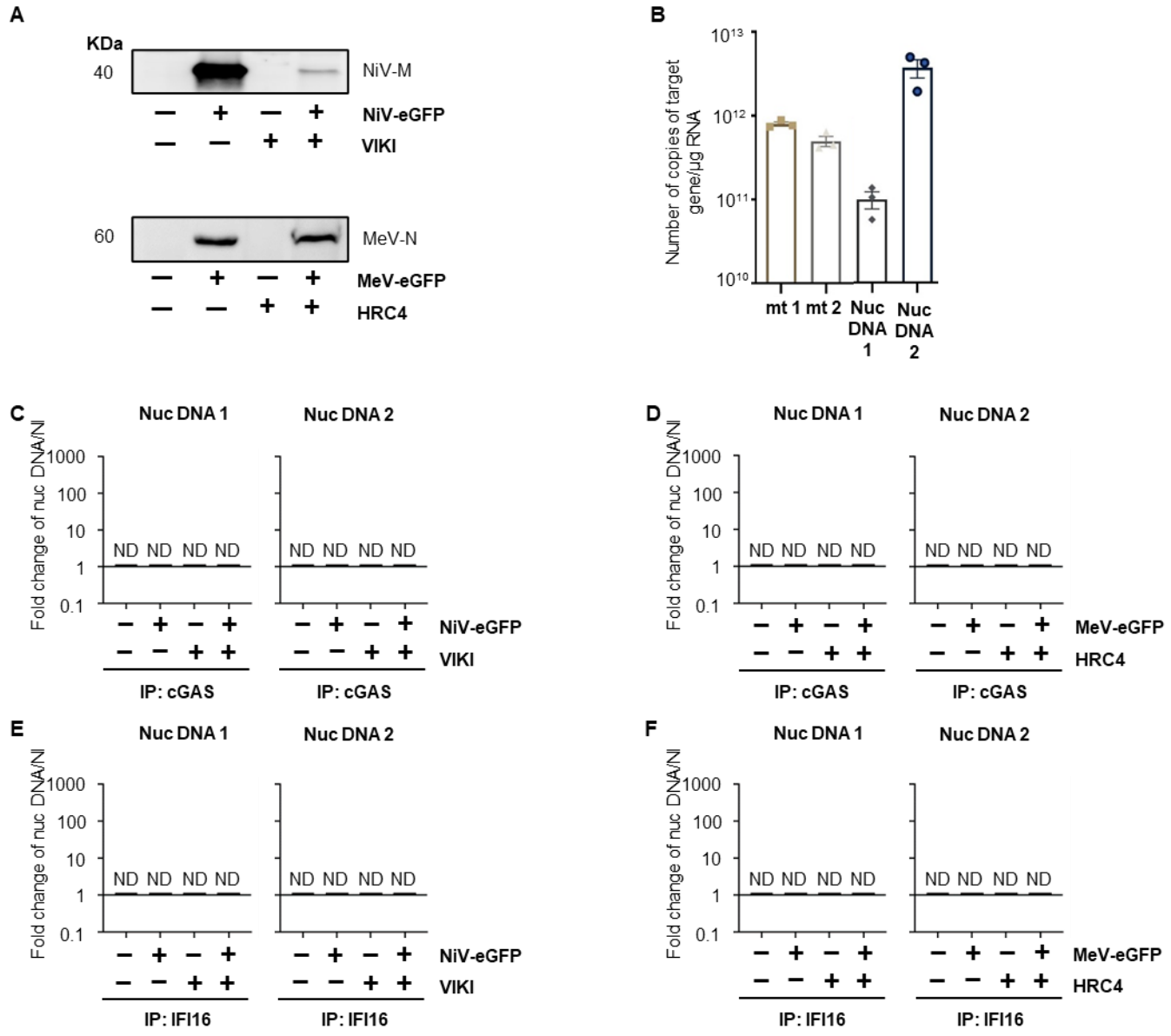
STING is activated following syncytia formation induced by NiV and MeV infection. (A-B) Band intensity from western blots presented in Figure 2B and 2D were calculated by densitometry using ImageJ on results from 3 independent replicates. All samples were analyzed using t-test, ns (not significant); *p<0.05; **p<0.01. **(C)** Expression of NiV-F and NiV-G was measured by flow cytometry in 293T and 293 cells prior to co-culture. **(D)** 293 and 293T cells were tested for IFI16, cGAS and STING expression by western blot analysis.

Fig. S3.



Evaluation of NiV-induced syncytia formation on mitochondrial and DNA damage. (A) HeLa cells WT or stably expressing NiV-F or NiV-G were cultured individually or co-cultured, treated or non-treated with VIKI fusion inhibitor peptide at 1 µM and incubated for 48h. **(B)** Expression of NiV-F and NiV-G in HeLa cells was measured by flow cytometry.

Fig. S4.



Mitochondrial DNA is responsible for STING activation through its sensing by cGAS and IFI16 during MeV and NiV infection. (A) Total RNA was extracted from non-infected HeLa cells and expression of mitochondrial DNA transcripts (mt 1 and mt 2) and nuclear DNA transcripts (Nuc DNA 1 and Nuc DNA 2) was assessed by RT-qPCR (n=3). **(B-E)** HeLa cells were infected with NiV-eGFP (A,B) or MeV-eGFP (C,D) at a MOI of 0.3 and treated or non-treated with VIKI or HRC4 fusion inhibitor peptides, respectively, at 1 µM 6h post infection. 48h post infection, cytoplasm was extracted and cGAS and IFI16 proteins were immunoprecipitated from cytoplasmic extract. DNA was purified from the immunoprecipitated products and analyzed by qPCR using primers specific for mtDNA or nuclear DNA. Purified DNA from immunoprecipitated cGAS (A,C) or IFI16 (B,D) was analyzed by RT-qPCR for two nuclear (Nuc DNA 1 and Nuc DNA 2) DNA regions.