



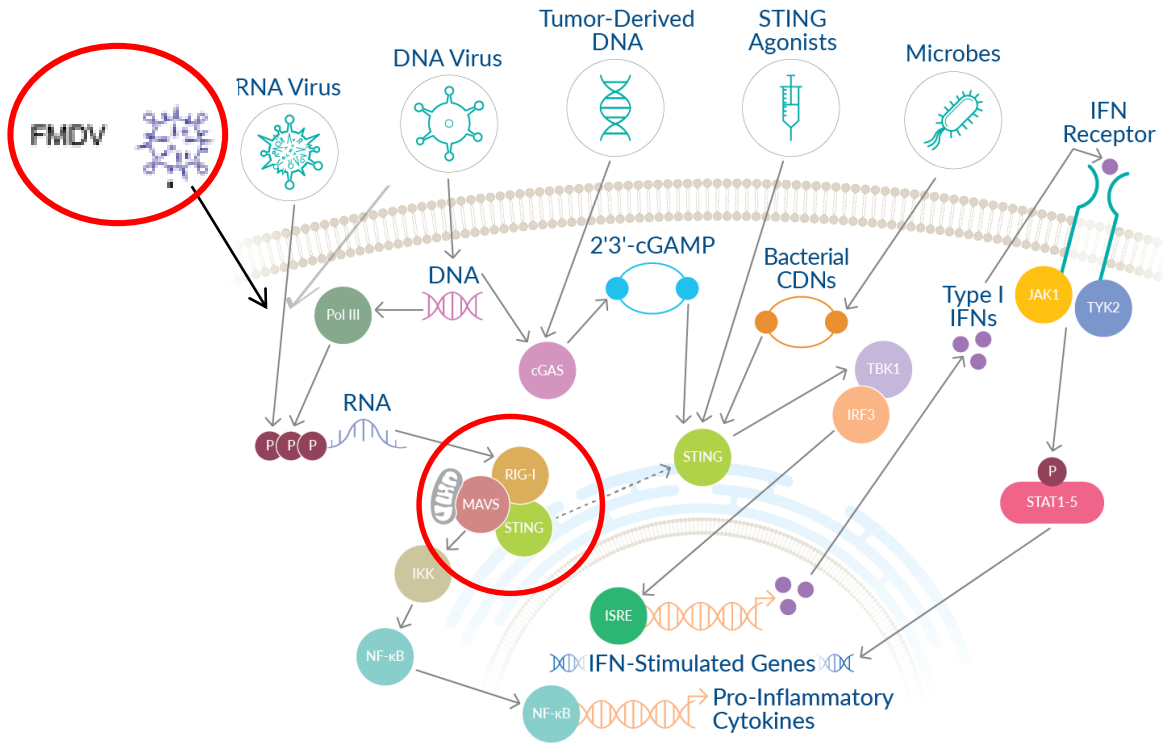
STING-MEDIATED INTEGRATED STRESS RESPONSE TO FMDV INFECTION

Rui Zhang, Xiaodong Qin, Zhixiong Zhang, Yanmin Li and Zhidong Zhang

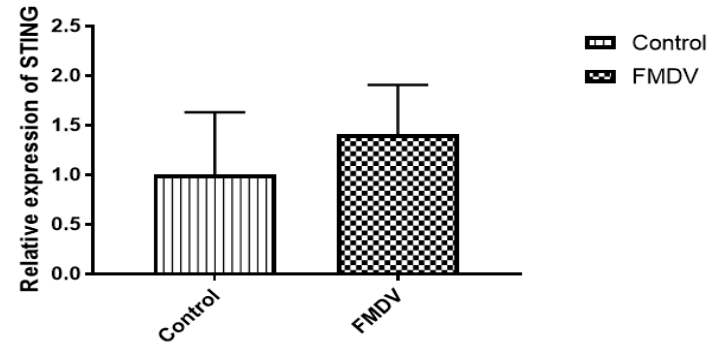
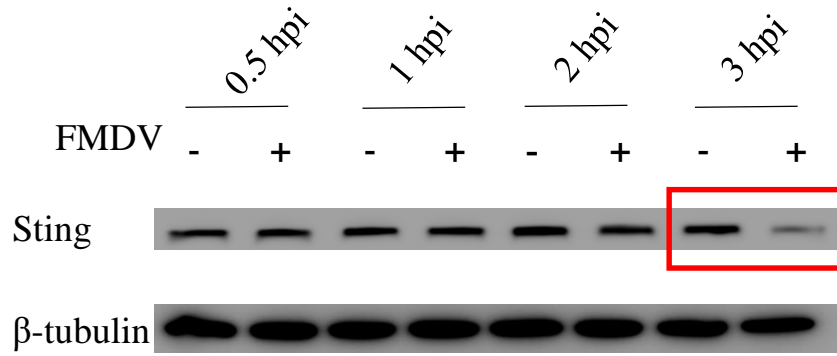
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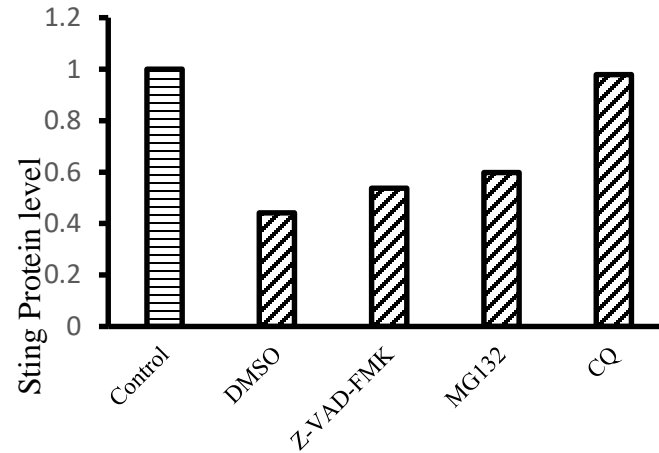
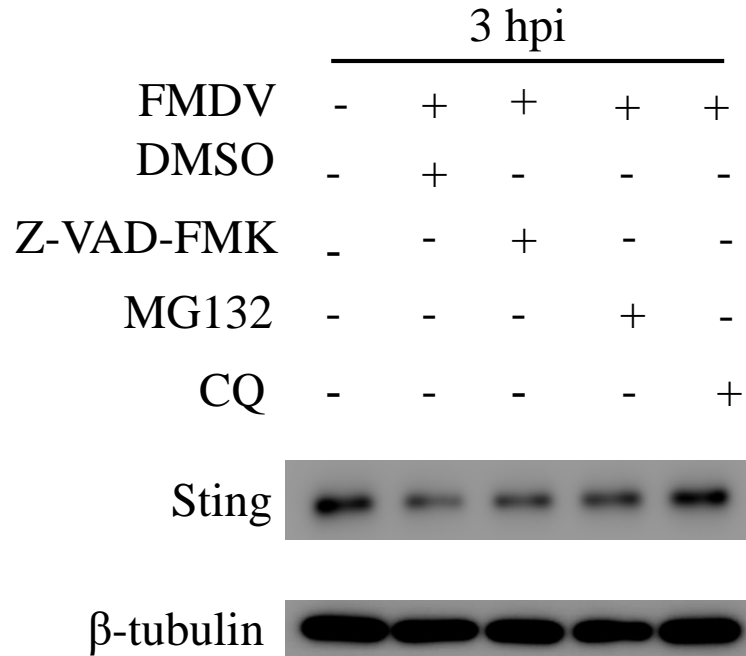
Sting(stimulator of interferon genes) in innate immune sensing of viruses



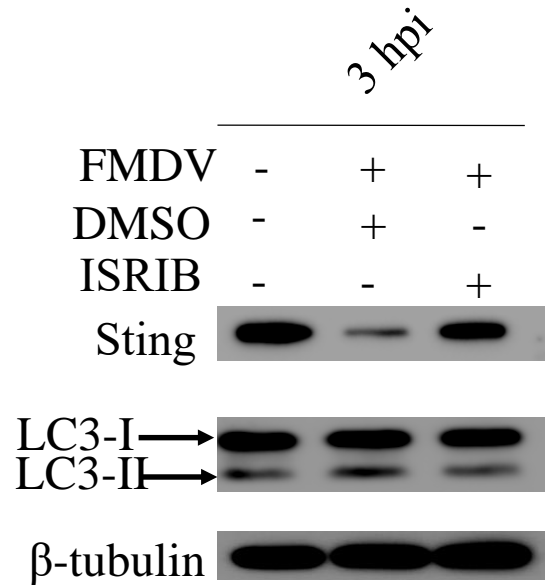
FMDV infection leads to Sting decrease in PK-15 cells at protein level



Autophagy is responsible for Sting decrease during FMDV infection

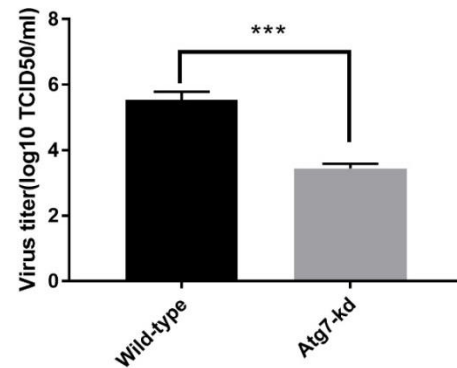
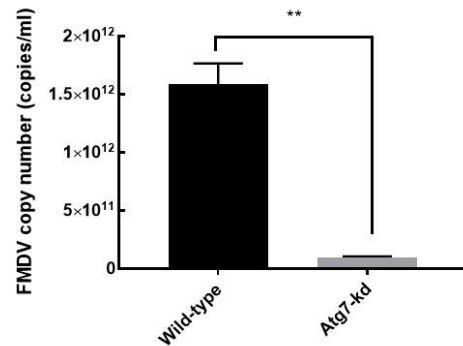
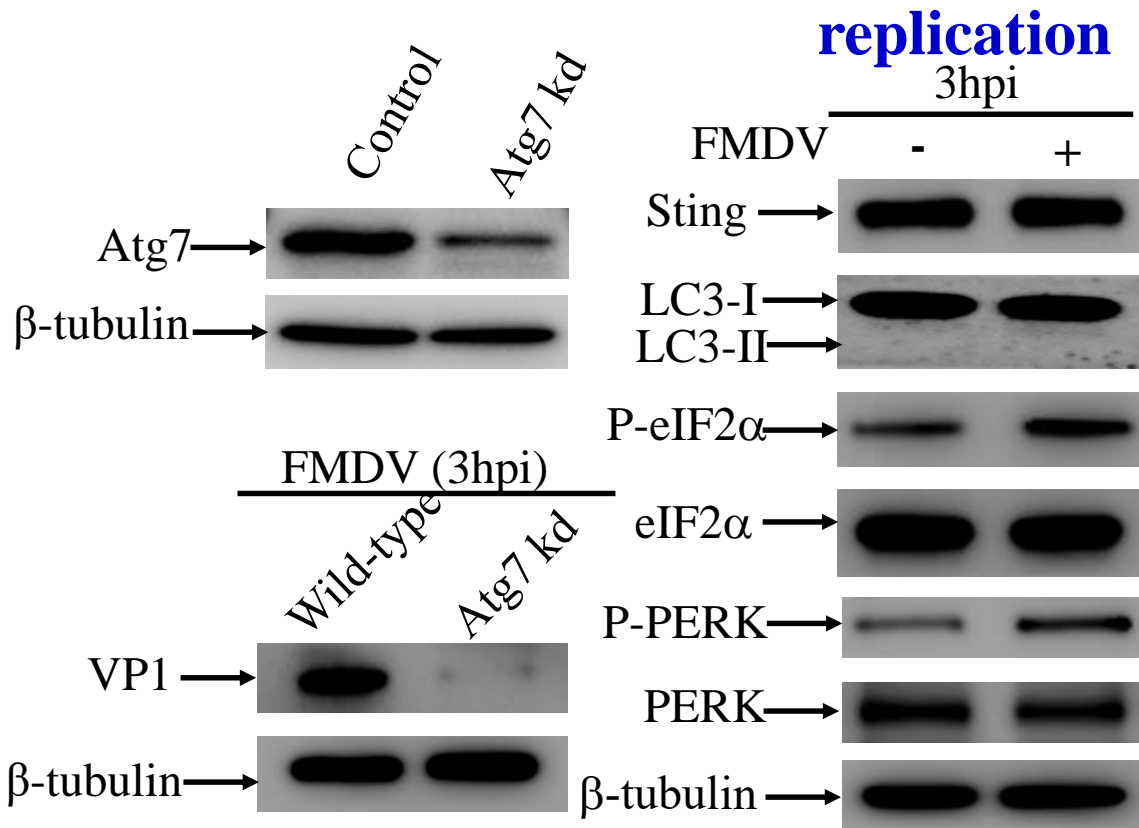


The decrease of **Sting** during **FMDV** infection is dependent on **ER-stress induced autophagy**

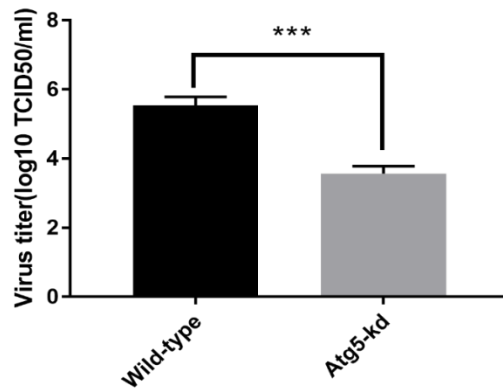
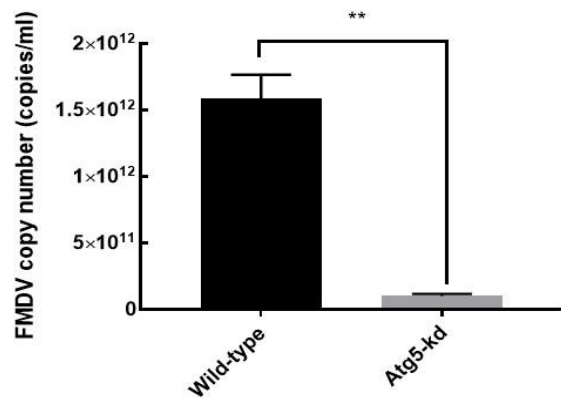
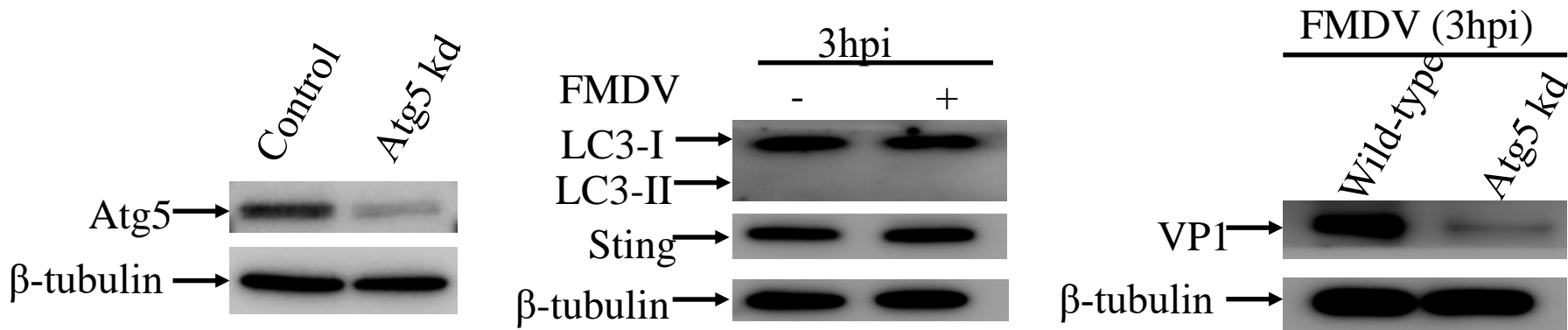


ISRIB, specific inhibitor of eIF2 α phosphorylation of PERK-eIF2 α axis.

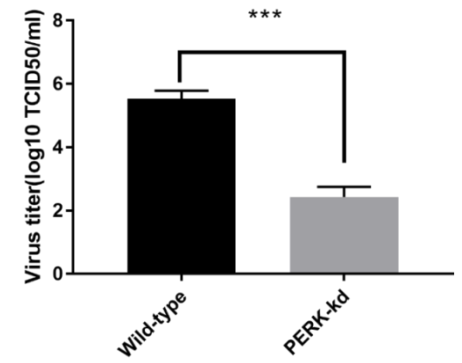
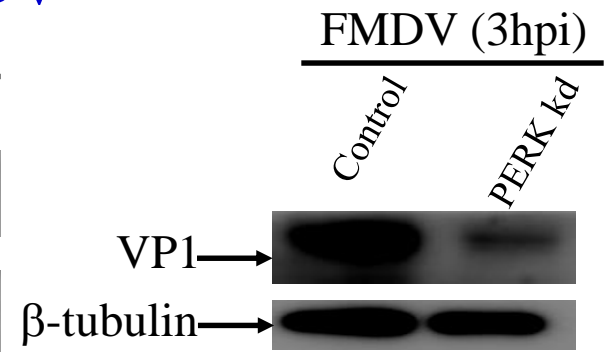
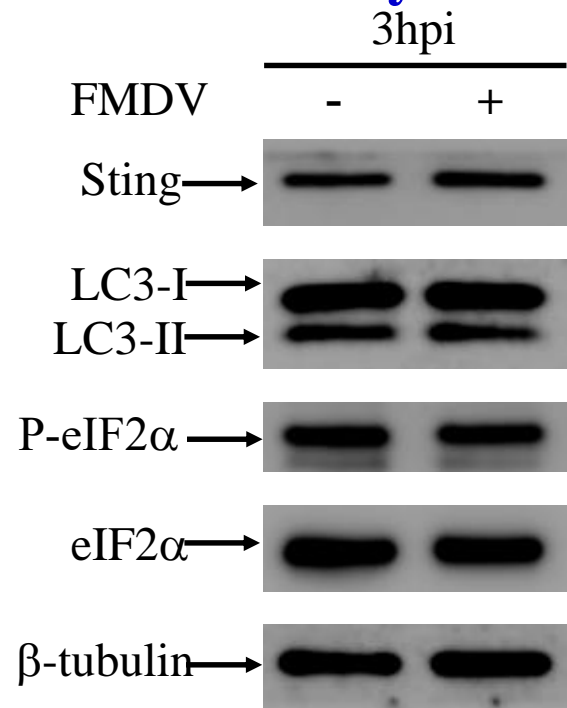
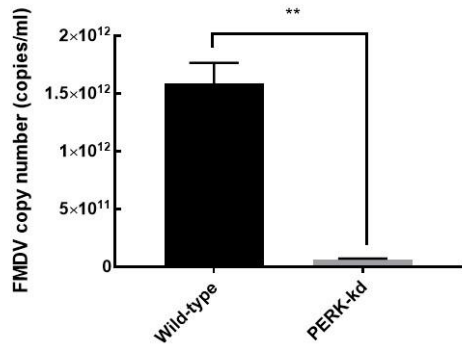
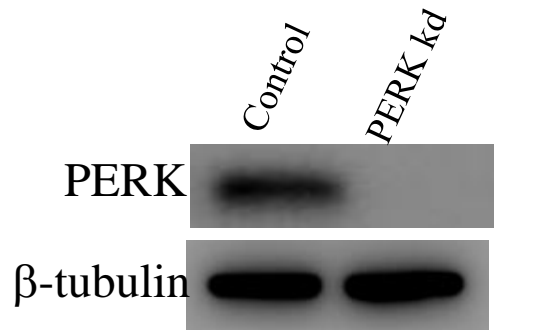
Atg7 is essential to ER-stress induced autophagy and FMDV replication



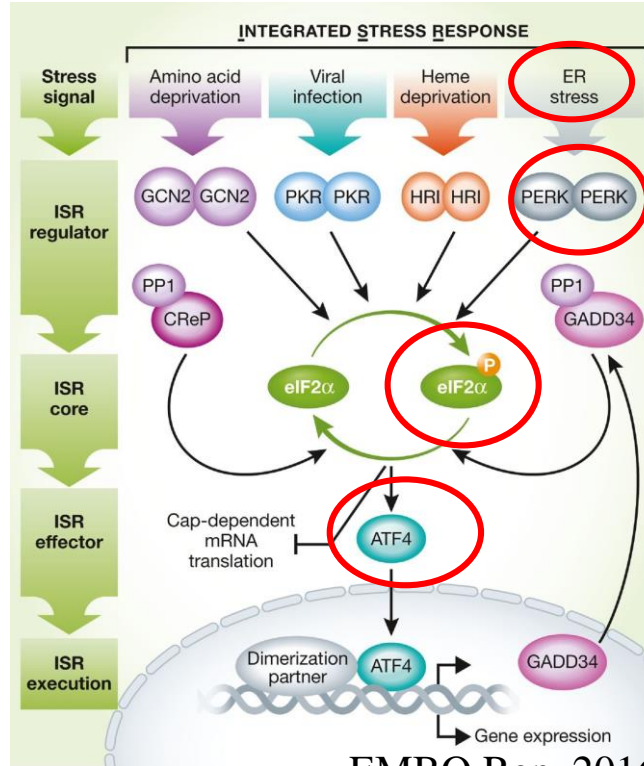
Atg5 is indispensable to Sting decrease and FMDV replication



PERK is necessary for autophagy induction and Sting degradation induced by FMDV

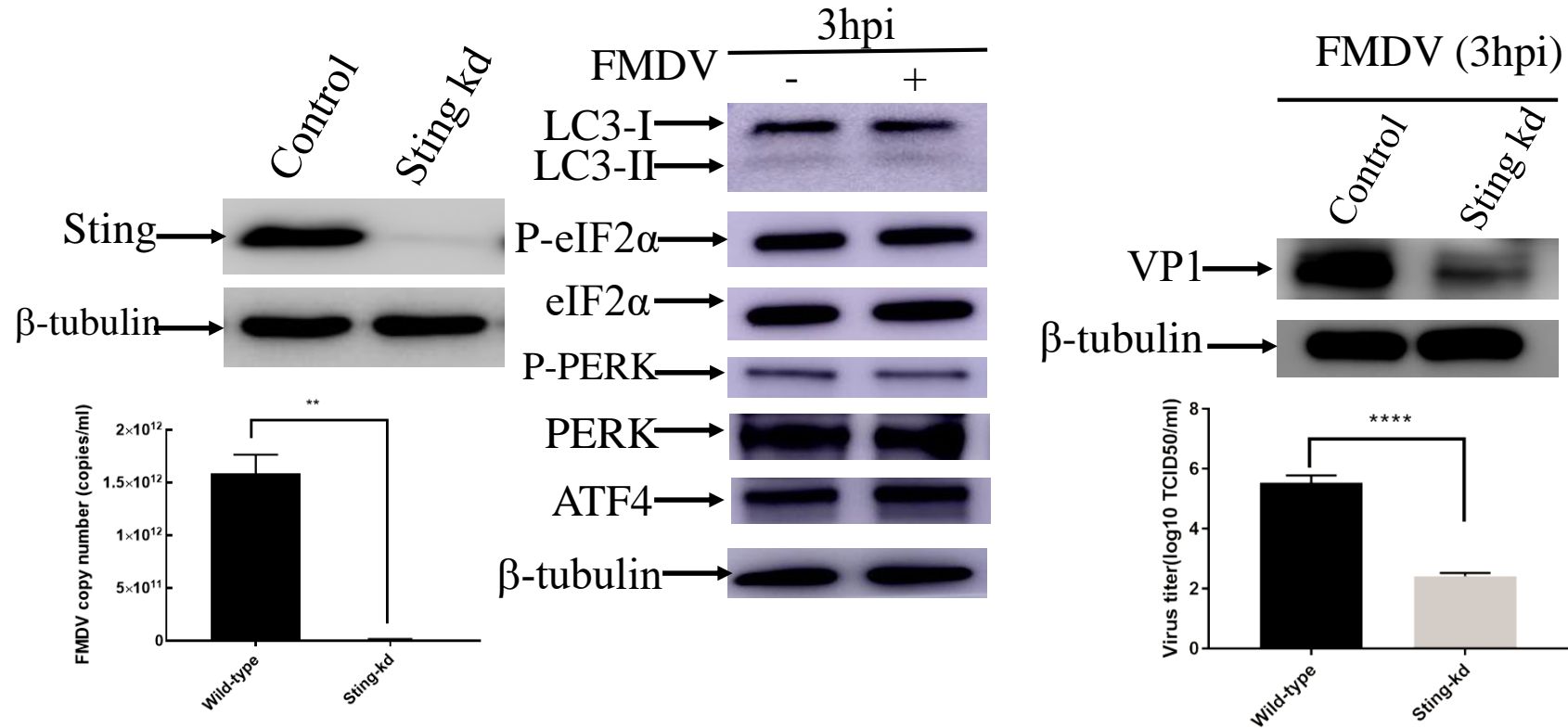


FMDV infection results in PERK-eIF2 α mediated integrated stress response(ISR) to induce autophagy

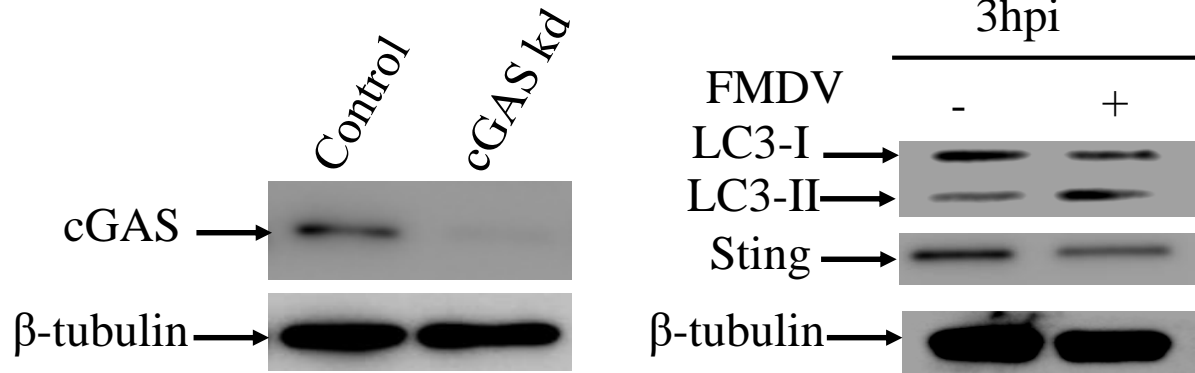


EMBO Rep. 2016 Oct;17(10):1374-1395.

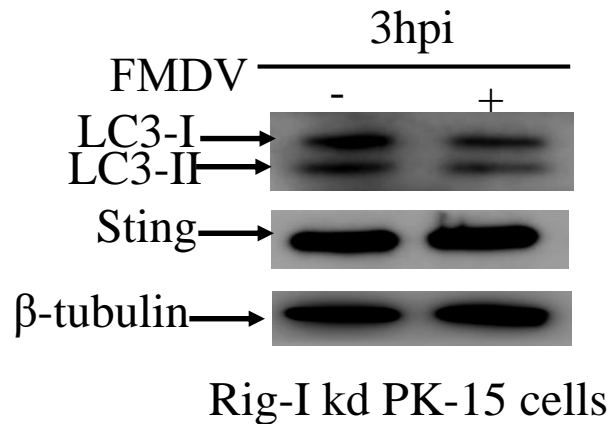
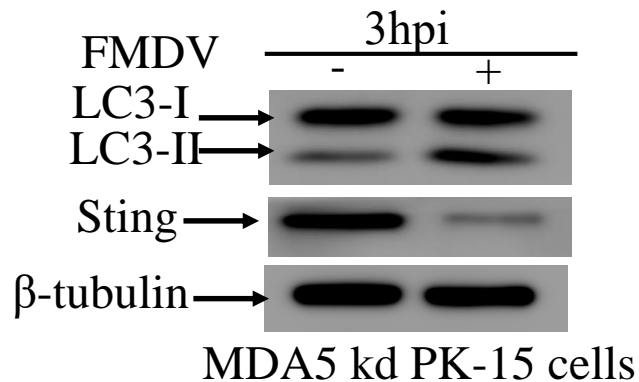
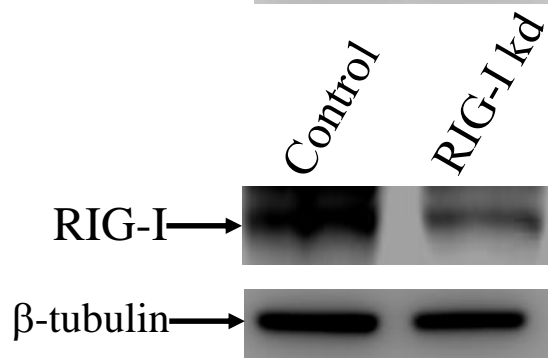
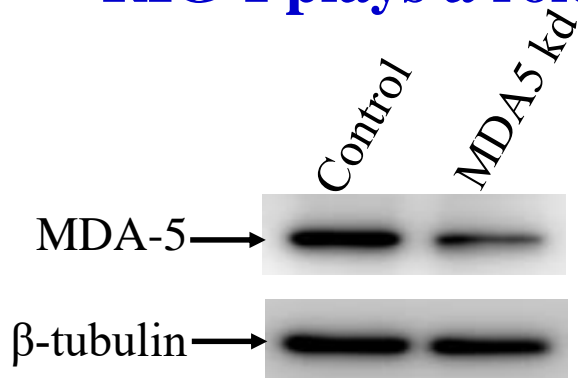
Sting **itself** is required for PERK activation and autophagy induction



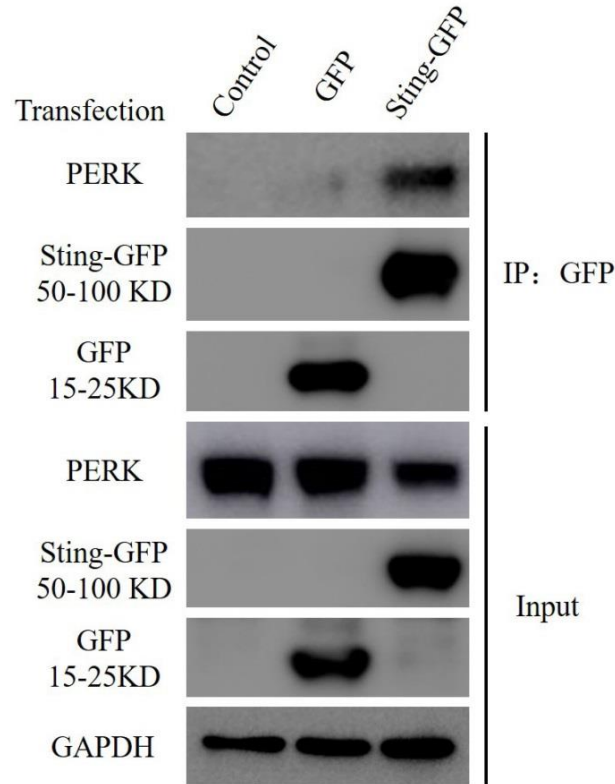
cGAS is not essential for Sting-dependent autophagy



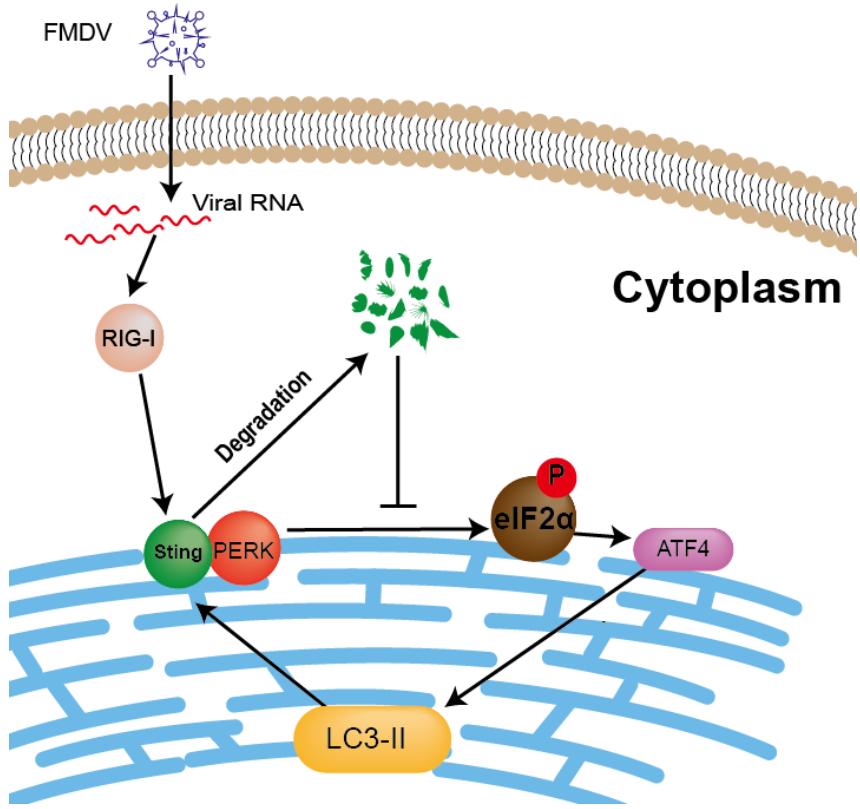
RIG-I plays a role in FMDV induced Sting degradation



PERK interacts with Sting during FMDV infection



Conclusion



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Thanks for your attention

