## **Supporting Information**

Movie S1 The fusion of HPIV3 IBs. Cells transfected with plasmids encoding GFP-N and mCherry-P of HPIV3 were visualized by living cell imaging at 12h posttransfection.
Movie S2 The fusion of RSV IBs. Cells transfected with plasmids encoding GFP-N and HA-P of RSV were visualized by living cell imaging 12h posttransfection.

**Movie S3** GFP-SIRT2 effects the fusion of HPIV3 IBs. Cells transfected with plasmids encoding N-Myc and mCherry-P protein of HPIV3 and plasmid encoding GFP-SIRT2 were visualized by living cell imaging 12h posttransfection.

**Movie S4** GFP-SIRT2-N168A has no effect on the fusion of HPIV3 IBs. Cells transfected with plasmids encoding N-Myc, mCherry-P of HPIV3 and GFP-SIRT2-N168A were visualized by living cell imaging at 12h posttransfection.