# Supplementary Result

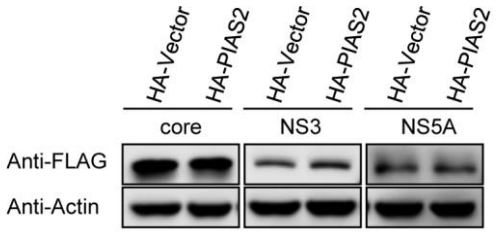


**Figure S1. Protein inhibitor of activated STAT2 (PIAS2) alone didn't influence the expression level of Hepatitis C virus (HCV) core, NS3 or NS5A.** 293T cells were transfected with pHA-Vector or pHA-PIAS2, HCV core, NS3 or NS5A expression plasmids. Total protein samples were collected and the expression levels of core, NS3 and NS5A were detected by western blotting.

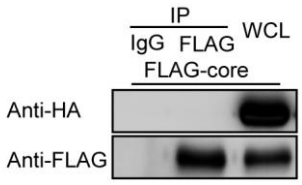


**Figure S2. HCV core could not interact with PIAS2 without overexpression SUMO1.** 293T cells were over-expressed with pHA-PIAS2, pFLAG-core. Co-immunoprecipitation was performed with FLAG or IgG antibody.

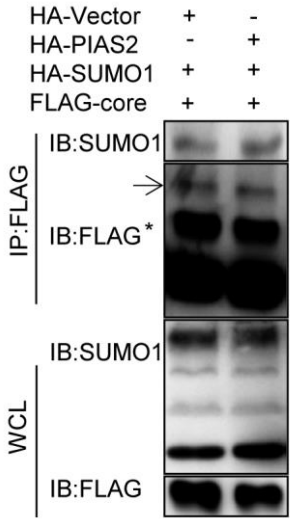


**Figure S3. The changes in core SUMOylation level by PIAS2 was not observed PIAS2 without MG132 treatment.** 293T cells were transfected with plasmids as indicated. Total proteins were collected by lysis Buffer with *N*-ethylmaleimide (NEM). Immunoprecipitation followed by western blotting were performed with indicated antibodies.

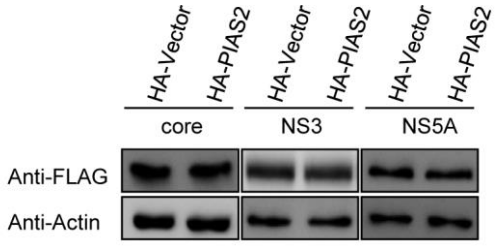


**Figure S4. In the presence of SUMO2/3, PIAS2 didn't influence the expression level of HCV core, NS3 or NS5A.** 293T cells were transfected with pHA-Vector or pHA-PIAS2, HCV core, NS3 or NS5A expression plasmids together with pCer-SUMO2/3. Total protein samples were collected and the expression levels of core, NS3 and NS5A were detected by western blotting.

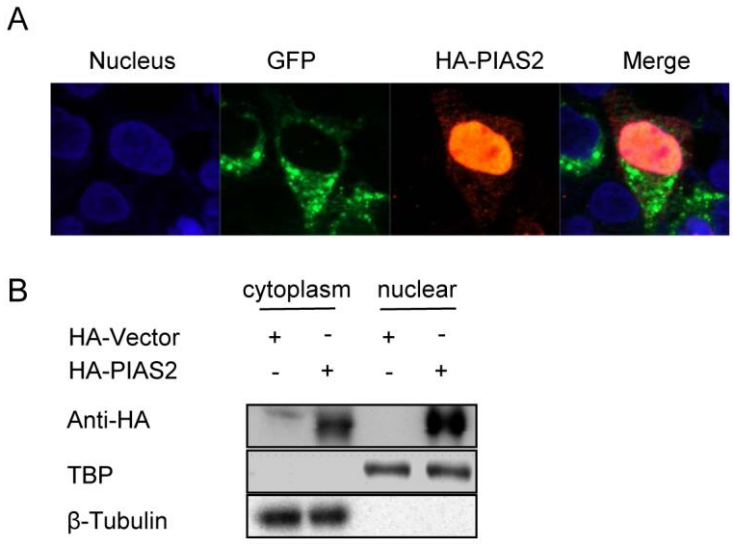


**Figure S5. PIAS2 mainly locates in the nucleus.** (A) Huh7 cells were transfected with pHA-PIAS2 and then infected with J399EM at an MOI of 0.1. At 72 hours post-infection, the cells were fixed with 4% paraformaldehyde and washed three times with PBS. The fixed cells were blocked in PBS containing 1% NGS at 37°C for 1 h and incubated with the primary antibody (anti-HA monoclonal antibody) for 1 h at 37°C. Subsequently, the cells were washed three times with PBS and incubated with a secondary antibody [Alexa-conjugated donkey anti-mouse/rabbit IgG antibody (Invitrogen)] for 1 h at 37°C. The cells were counterstained with DAPI, washed with PBS and examined under a confocal laser microscope. The localization of NS5A was shown by EGFP and immunofluorescence was performed to show the location of PIAS2. (B) Huh7 cells were transfected with pHA-Vector or pHA-PIAS2. Nuclear and cytosol proteins were separated with nuclear/cytosol fraction kit and the subcellular fractions were detected by western blotting.

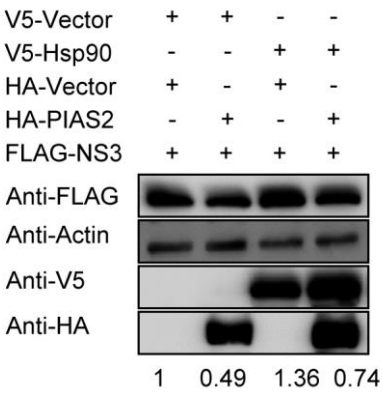


**Figure S6. Heat shock protein 90 (HSP90) did not interfere PIAS2 mediates NS3 degradation.** 293T cells were transfected with plasmids as indicated. The proteins expression was detected by western blotting.