Anti-STING Antibody [PSH07-44] - BSA and Azide free

HA751165

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IF-Cell, IHC-P, FC, IF-Tissue, IP
Molecular Wt:	Predicted band size: 42 kDa
Clone number:	PSH07-44

Description: Stimulator of interferon genes (STING), also known as transmembrane protein 173 (TMEM173) and MPYS/MITA/ERIS is a protein that in humans is encoded by the STING1 gene. STING plays an important role in innate immunity. STING induces type I interferon production when cells are infected with intracellular pathogens, such as viruses, mycobacteria and intracellular parasites.Type I interferon, mediated by STING, protects infected cells and nearby cells from local infection by binding to the same cell that secretes it (autocrine signaling) and nearby cells (paracrine signaling.) It thus plays an important role, for instance, in controlling norovirus infection. STING works as both a direct cytosolic DNA sensor (CDS) and an adaptor protein in Type I interferon signaling through different molecular mechanisms. It has been shown to activate downstream transcription factors STAT6 and IRF3 through TBK1, which are responsible for antiviral response and innate immune response against intracellular pathogen.

Immunogen: Recombinant protein within human STING aa 117-379.

Positive control: HDLM-2 cell lysate, THP-1 cell lysate, HT-29 cell lysate, HepG2 cell lysate, HaCaT cell lysate, HL-60 cell lysate, HEK-293 cell lysate, K-562 cell lysate, A20 cell lysate, C2C12 cell lysate, EL4 cell lysate, Rat thymus tissue lysate, human lung tissue, human tonsil tissue, THP-1, PC-12.

Subcellular location: Endoplasmic reticulum membrane, Cytoplasm, perinuclear region, Endoplasmic reticulum-Golgi intermediate compartment membrane, Golgi apparatus membrane, Cytoplasmic vesicle, autophagosome membrane, Mitochondrion outer membrane, Cell membrane.

Database links: SwissProt: Q86WV6 Human | Q3TBT3 Mouse | F1M391 Rat

Recommended Dilutions:

WB	1:5,000
IF-Cell	1:100
IHC-P	1:4,000
FC	1:1,000
IF-Tissue	1:500-1:1,000
IP	1-2μg/sample

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

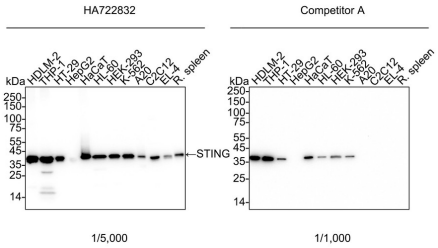

Fig1: Western blot analysis of STING on different lysates with Rabbit anti-STING antibody (HA751165) at 1/5,000 dilution and competitor's antibody at 1/1,000 dilution.

Lane 1: HDLM-2 cell lysate (20 µg/Lane)
Lane 2: THP-1 cell lysate (20 µg/Lane)
Lane 3: HT-29 cell lysate (20 µg/Lane)
Lane 4: HepG2 cell lysate (20 µg/Lane)
Lane 5: HaCaT cell lysate (20 µg/Lane)
Lane 6: HL-60 cell lysate (20 µg/Lane)
Lane 7: HEK-293 cell lysate (20 µg/Lane)
Lane 8: K-562 cell lysate (20 µg/Lane)
Lane 9: A20 cell lysate (20 µg/Lane)
Lane 10: C2C12 cell lysate (20 µg/Lane)
Lane 11: EL4 cell lysate (20 µg/Lane)
Lane 12: Rat spleen tissue lysate (40 µg/Lane)

Predicted band size: 42 kDa
Observed band size: 37 kDa

Exposure time: Lane 1-12 (left): 6 seconds; Lane 1-12 (right): 30 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA751165) at 1/5,000 dilution and competitor's antibody at 1/1,000 dilution were used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

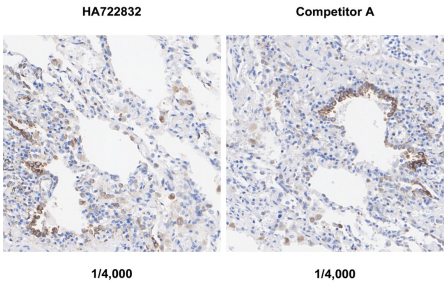

Fig2: Immunohistochemical analysis of paraffin-embedded human lung tissue with Rabbit anti-STING antibody (HA751165) at 1/4,000 dilution and competitor's antibody at 1/4,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA751165) at 1/4,000 dilution and competitor's antibody at 1/4,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

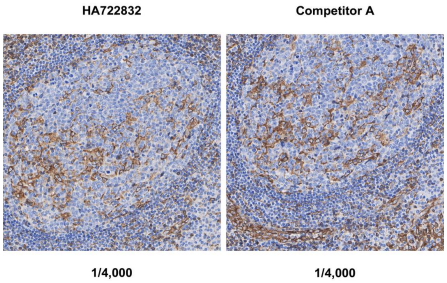

Fig3: Immunohistochemical analysis of paraffin-embedded human tonsil tissue with Rabbit anti-STING antibody (HA751165) at 1/4,000 dilution and competitor's antibody at 1/4,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA751165) at 1/4,000 dilution and competitor's antibody at 1/4,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

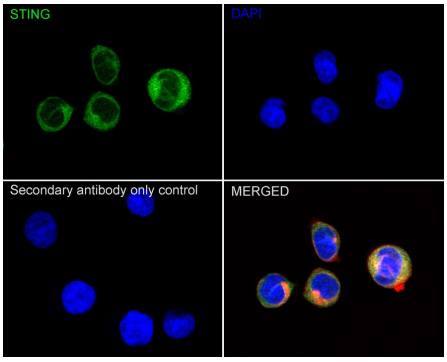

Fig4: Immunocytochemistry analysis of THP-1 cells labeling STING with Rabbit anti-STING antibody (HA751165) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-STING antibody (HA751165) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

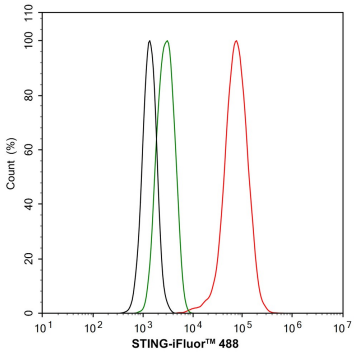

Fig5: Flow cytometric analysis of THP-1 cells labeling STING.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA751165, 1/1,000) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

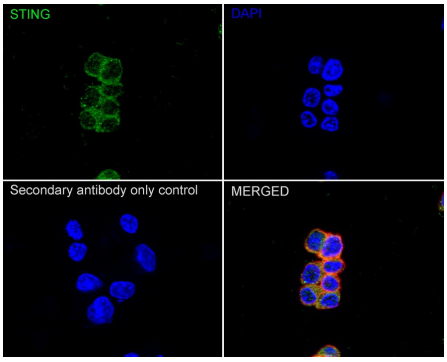

Fig6: Immunocytochemistry analysis of PC-12 cells labeling STING with Rabbit anti-STING antibody (HA751165) at 1/100 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-STING antibody (HA751165) at 1/100 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

Background References

1. Liu K et al. Lipotoxicity-induced STING1 activation stimulates MTORC1 and restricts hepatic lipophagy. Autophagy. 2022 Apr
2. Zhang R et al. STING1 in Different Organelles: Location Dictates Function. Front Immunol. 2022 Mar