Anti-Phospho-STAT1 (Y701) Antibody [PSH04-02] HA722083

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell
Molecular Wt:	Predicted band size: 87 kDa
Clone number:	PSH04-02

Description: Signal transducer and activator of transcription 1 (STAT1) is a transcription factor which in humans is encoded by the STAT1 gene. It is a member of the STAT protein family. All STAT molecules are phosphorylated by receptor associated kinases, that causes activation, dimerization by forming homo- or heterodimers and finally translocate to nucleus to work as transcription factors. Specifically STAT1 can be activated by several ligands such as Interferon alpha (IFNα), Interferon gamma (IFNγ), Epidermal Growth Factor (EGF), Platelet Derived Growth Factor (PDGF), Interleukin 6 (IL-6), or IL-27.

Immunogen: Synthetic phospho-peptide corresponding to residues surrounding Tyr701 of Human STAT1.

Positive control: HeLa treated with 100ng/mL IFNγ for 30 minutes cell lysate, HeLa treated with 50ng/mL IFNα1 for 30 minutes cell lysate, A431 treated with 100ng/mL EGF for 30 minutes cell lysate, HeLa cells treated with 100ng/mL IFNα1 for 5 minutes.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt: P42224 Human

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:100

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

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

Purity: Protein A affinity purified.

Images

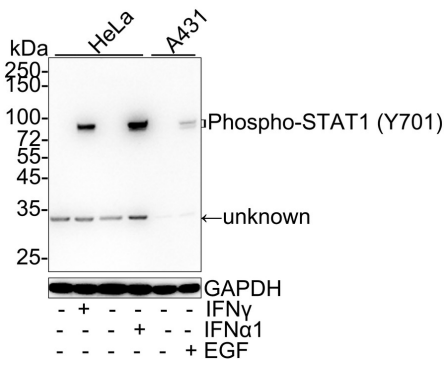

Fig1: Western blot analysis of Phospho-STAT1 (Y701) on different lysates with Rabbit anti-Phospho-STAT1 (Y701) antibody (HA722083) at 1/1,000 dilution.

Lane 1: HeLa cell lysate
Lane 2: HeLa treated with 100ng/mL IFNγ for 30 minutes cell lysate
Lane 3: HeLa cell lysate
Lane 4: HeLa treated with 50ng/mL IFNα1 for 30 minutes cell lysate
Lane 5: A431 cell lysate
Lane 6: A431 treated with 100ng/mL EGF for 30 minutes cell lysate

Lysates/proteins at 20 µg/Lane.
Predicted band size: 87 kDa
Observed band size: 91/84 kDa (STAT1α/β)
Exposure time: 3 minutes;
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 (HA722083) at 1/1,000 dilution was 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.

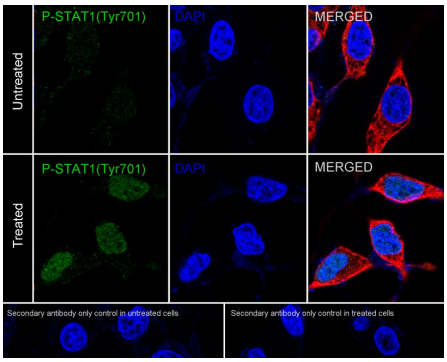

Fig2: Immunocytochemistry analysis of HeLa cells treated with 100ng/mL IFNα1 for 5 minutes labeling Phospho-STAT1 (Y701) with Rabbit anti-Phospho-STAT1 (Y701) antibody (HA722083) at 1/100 dilution.

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-Phospho-STAT1 (Y701) antibody (HA722083) 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.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Kondo S et al. STAT1 upregulates glutaminase and modulates amino acids and glutathione metabolism. Biochem Biophys Res Commun. 2020 Mar
2. Metwally H et al. Noncanonical STAT1 phosphorylation expands its transcriptional activity into promoting LPS-induced IL-6 and IL-12p40 production. Sci Signal. 2020 Mar