Anti-STAT1 Antibody [G3-B11-R]

HA601309

Product Type:	Recombinant Mouse monoclonal IgG1, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 87/83 kDa
Clone number:	G3-B11-R

Description: STAT1 is a member of the Signal Transducers and Activators of Transcription family of transcription factors. STAT1 is involved in upregulating genes due to a signal by either type I, type II, or type III interferons. In response to IFN-γ stimulation, STAT1 forms homodimers or heterodimers with STAT3 that bind to the GAS (Interferon-Gamma-Activated Sequence) promoter element; in response to either IFN-α or IFN-β stimulation, STAT1 forms a heterodimer with STAT2 that can bind the ISRE (Interferon-Stimulated Response Element) promoter element. The phosphorylated STATs dimerize and associate with ISGF3G/IRF-9 to form a complex termed ISGF3 transcription factor that enters the nucleus. ISGF3 binds to the IFN stimulated response element (ISRE) to activate the transcription of IFN-stimulated genes (ISG), which drive the cell in an antiviral state. In response to type II IFN (IFN-gamma), STAT1 is tyrosine- and serine-phosphorylated.

Immunogen: Recombinant protein within Human STAT1 aa 71-270 / 750.

Positive control: Jurkat cell lysate, A431 cell lysate, HeLa cell lysate, A549 cell lysate, SK-Br-3 cell lysate, SK-MEL-28 cell lysate, MCF7 cell lysate, HT-29 cell lysate, human breast cancer tissue, human spleen tissue.

Subcellular location: Cytoplasm, nucleus

Database links: SwissProt: P42224 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000

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

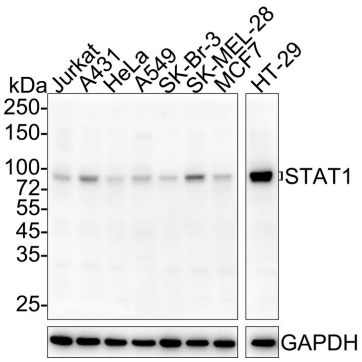

Fig1: Western blot analysis of STAT1 on different lysates with Mouse anti-STAT1 antibody (HA601309) at 1/1,000 dilution.

Lane 1: Jurkat cell lysate
Lane 2: A431 cell lysate
Lane 3: HeLa cell lysate
Lane 4: A549 cell lysate
Lane 5: SK-Br-3 cell lysate
Lane 6: SK-MEL-28 cell lysate
Lane 7: MCF7 cell lysate
Lane 8: HT-29 cell lysate

Lysates/proteins at 15 µg/Lane.

Predicted band size: 87/83 kDa
Observed band size: 87/83 kDa

Exposure time: 30 seconds; ECL: K1802;

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 (HA601309) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

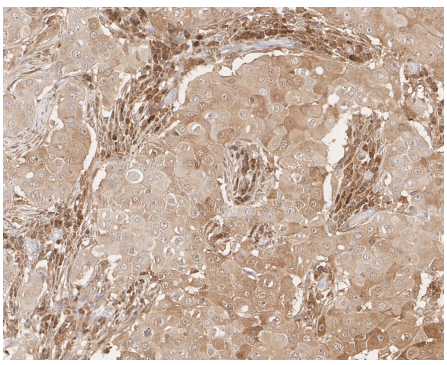

Fig2: Immunohistochemical analysis of paraffin-embedded human breast cancer tissue with Mouse anti-STAT1 antibody (HA601309) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 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 (HA601309) at 1/1,000 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.

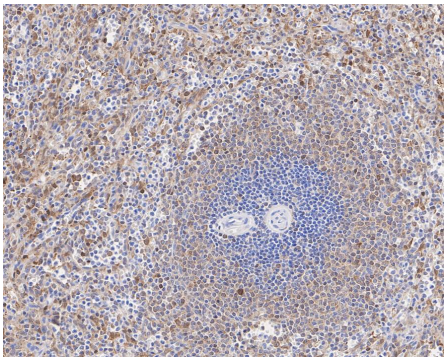

Fig3: Immunohistochemical analysis of paraffin-embedded human spleen tissue with Mouse anti-STAT1 antibody (HA601309) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 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 (HA601309) at 1/1,000 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.

Background References

1. Clark DN et al. Unique aspects of IFN-γ/STAT1 signaling in neurons. Immunol Rev. 2022 Oct
2. Butturini E et al. Redox Regulation of STAT1 and STAT3 Signaling. Int J Mol Sci. 2020 Sep