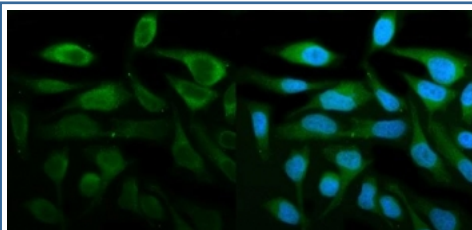


STAT1 Antibody (R30259)

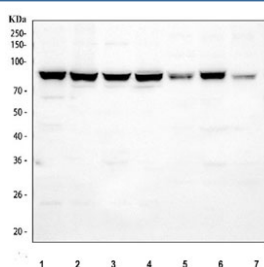
Catalog No.	Formulation	Size
R30259	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

[Bulk quote request](#)

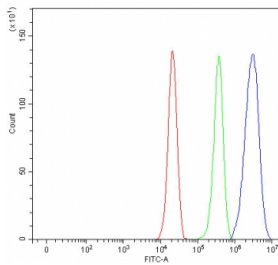
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P42224
Applications	Western Blot : 0.5-1ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/ml
Limitations	This STAT1 antibody is available for research use only.



Immunofluorescent staining of FFPE human HeLa cells with STAT1 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) human A549, 2) human HeLa, 3) human 293T, 4) human K562, 5) rat PC-12, 6) rat NRK and 7) mouse NIH 3T3 cell lysate with STAT1 antibody. Predicted molecular weight: ~91/84 kDa (alpha/beta).



Flow cytometry testing of fixed and permeabilized human A549 cells with STAT1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= STAT1 antibody.

Description

STAT1 Antibody is designed for the detection and study of Signal Transducer and Activator of Transcription 1 (STAT1), a critical transcription factor that functions as a central mediator of cytokine, interferon, and growth factor signaling. STAT1 plays an essential role in the JAK-STAT signaling pathway, one of the primary mechanisms by which extracellular signals are transmitted to the nucleus to regulate gene expression. Through its ability to coordinate transcriptional responses, STAT1 contributes to immune regulation, cellular differentiation, host defense, and maintenance of tissue homeostasis.

STAT1 belongs to the STAT family of latent cytoplasmic transcription factors that become activated through phosphorylation following stimulation of cytokine receptors. Upon activation, STAT1 forms dimers and translocates to the nucleus where it binds regulatory DNA sequences and controls expression of genes involved in immunity, inflammation, cellular adaptation, and signal transduction. This highly conserved signaling mechanism enables cells to rapidly respond to environmental changes and extracellular stimuli.

One of the best-characterized functions of STAT1 is its role in mediating interferon signaling. STAT1-dependent transcriptional programs regulate genes involved in antiviral responses, immune surveillance, antigen presentation, and inflammatory signaling. Because of its central position within both innate and adaptive immune pathways, STAT1 has become one of the most extensively studied transcription factors in immunology and cytokine biology. Researchers frequently evaluate STAT1 expression and localization when investigating immune responses and signal-dependent gene regulation.

Beyond immunology, STAT1 participates in numerous biologic processes including apoptosis, cell cycle regulation, tissue remodeling, developmental signaling, and cellular stress responses. As a key signaling intermediary, STAT1 integrates inputs from multiple extracellular pathways and converts them into coordinated transcriptional programs. These diverse functions have established STAT1 as an important target in studies of signal transduction, cancer biology, developmental biology, infectious disease, and inflammatory disorders.

STAT1 Antibody is useful for investigating JAK-STAT pathway activation, interferon signaling, cytokine responses, immune regulation, transcriptional control, and cellular signaling mechanisms. Researchers utilize STAT1 Antibody reagents to evaluate protein expression patterns and study molecular pathways governing host defense, signal transduction, cellular communication, and transcription factor-dependent gene regulation.

Learn more about STAT1 function, interferon signaling, and JAK-STAT pathway regulation on our [STAT1 Antibody / JAK-STAT Pathway Transcription Factor](#) page.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the STAT1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids 364-378 (FDKDVNERNTVKGFR-human) were used as the immunogen for this STAT1 antibody.

Storage

After reconstitution, the STAT1 antibody can be stored for up to one month at 4°C. For long-term, aliquot and store at -20°C. Avoid repeated freezing and thawing.