

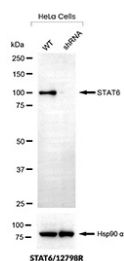
Signal Transducer 6 Antibody / STAT6 [clone STAT6/12798R] (V6003)

Catalog No.	Formulation	Size
V6003-100UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6003-20UG	0.2 mg/ml in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug
V6003SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

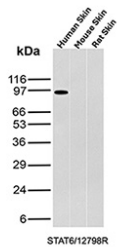
Recombinant **RABBIT MONOCLONAL**

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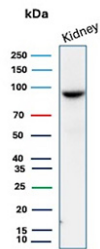
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	STAT6/12798R
UniProt	P42226
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml Knockdown : Western Blot : 2-4ug/ml
Limitations	This Signal Transducer 6/STAT6 antibody is available for research use only.



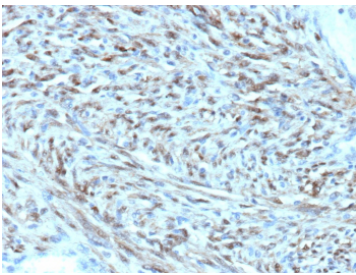
Western blot analysis of Signal Transducer 6/STAT6 antibody (clone STAT6/12798R) in human HeLa cells. Whole cell lysates from wild-type (WT) and STAT6 shRNA knockdown (KD) HeLa cells were resolved by SDS-PAGE using 30 ug of total protein per lane. A prominent band is detected at approximately 100 kDa in WT cells, consistent with the predicted molecular weight of Signal Transducer and Activator of Transcription 6. The band intensity is markedly reduced in STAT6 shRNA knockdown cells, supporting target-specific detection. Hsp90 alpha is shown as a loading control and demonstrates comparable protein loading between lanes.



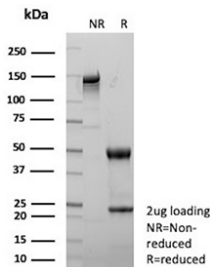
Western blot analysis of Signal Transducer 6/STAT6 antibody (clone STAT6/12798R) in human, mouse, and rat skin tissue lysates. A distinct immunoreactive band is observed at approximately 100 kDa in human skin lysate, consistent with the predicted molecular weight of Signal Transducer and Activator of Transcription 6. Mouse skin and rat skin lysates show no detectable band under the conditions tested. The observed band in human tissue aligns with the expected size of STAT6, which typically migrates near 100 kDa on SDS-PAGE.



Western blot analysis of Signal Transducer 6/STAT6 antibody (clone STAT6/12798R) in human kidney tissue lysate. A distinct immunoreactive band is detected at approximately 100 kDa, consistent with the predicted molecular weight of Signal Transducer and Activator of Transcription 6. The band migrates at the expected size for STAT6 on SDS-PAGE, supporting detection of endogenous STAT6 protein in human kidney tissue under the conditions tested.



Immunohistochemistry analysis of Signal Transducer 6/STAT6 antibody in human liposarcoma tissue (clone STAT6/12798R). FFPE human liposarcoma sections demonstrate strong HRP-DAB brown nuclear staining in spindle-shaped tumor cells arranged in intersecting fascicles. The predominant nuclear localization is consistent with activated Signal Transducer and Activator of Transcription 6, reflecting phosphorylation-dependent nuclear translocation. Background stromal elements show minimal non-specific staining. Heat induced epitope retrieval was performed in 10 mM Tris with 1 mM EDTA, pH 9.0, by heating tissue sections at 95°C for 45 minutes followed by cooling at room temperature for 20 minutes prior to antibody incubation.



SDS-PAGE Analysis of Purified Signal Transducer 6/STAT6 antibody (STAT6/12798R). Confirmation of Purity and Integrity of Antibody.

Description

Signal Transducer 6 antibody, also known as STAT6 antibody, recognizes Signal Transducer and Activator of Transcription 6, a cytokine-responsive transcription factor encoded by the human STAT6 gene located on chromosome 12q13.3. STAT6 is a member of the STAT family of latent cytoplasmic transcription factors that mediate signal transduction from cell surface cytokine receptors to the nucleus. In resting cells, STAT6 is primarily localized in the cytoplasm and translocates to the nucleus upon activation. Signal Transducer 6 antibody is widely used in research focused on IL-4 and IL-13 signaling pathways and type 2 immune responses.

Signal Transducer and Activator of Transcription 6 plays a central role in T helper 2 cell differentiation and allergic inflammation. Upon binding of interleukin-4 or interleukin-13 to their respective receptor complexes, associated Janus kinases phosphorylate STAT6 on a conserved tyrosine residue. Phosphorylated STAT6 dimerizes via its SH2 domain and translocates to the nucleus, where it binds specific DNA response elements to regulate genes involved in IgE class switching, mucus production, chemokine expression, and immune cell recruitment. A Signal Transducer 6 antibody supports investigation of cytokine-driven transcriptional regulation and immune signaling networks.

Structurally, STAT6 contains conserved STAT family domains including an N-terminal domain, coiled-coil domain, DNA-

binding domain, linker region, SH2 domain, and a C-terminal transactivation domain. These domains coordinate receptor recruitment, dimerization, DNA binding, and transcriptional activation. Through these structural features, STAT6 integrates extracellular cytokine cues into gene expression programs that influence lymphocyte differentiation, macrophage polarization, and epithelial responses.

STAT6 expression is detected in T lymphocytes, B lymphocytes, dendritic cells, macrophages, and select epithelial tissues under cytokine stimulation. Aberrant STAT6 activation has been implicated in asthma, atopic dermatitis, and other allergic disorders. In tumor research, nuclear STAT6 expression has been studied in specific soft tissue neoplasms and other malignancies, where its localization may reflect altered signaling pathways. Signal Transducer 6 antibody enables evaluation of STAT6 expression and subcellular localization in diverse research models.

Clone STAT6/12798 is designed to recognize STAT6 for research applications. This antibody targets STAT6 in research settings and supports studies of cytokine signaling, immune regulation, and inflammatory disease biology.

Application Notes

Optimal dilution of the Signal Transducer 6/STAT6 antibody should be determined by the researcher.

Immunogen

A recombinant fragment (around amino acids 600-801) of human STAT6 protein (exact sequence is proprietary) was used as the immunogen for the Signal Transducer 6/STAT6 antibody.

Storage

Signal Transducer 6/STAT6 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.