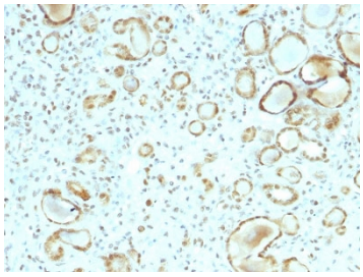
STAT6 Antibody [clone STAT6/2410] (V3893)

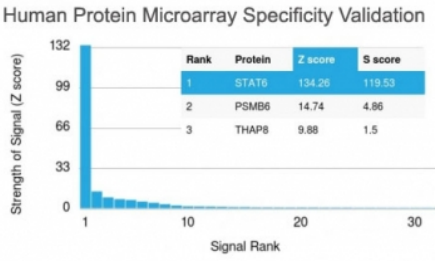
Catalog No.	Formulation	Size
V3893-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3893-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3893SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

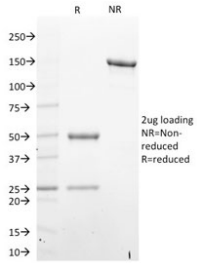
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	STAT6/2410
Purity	Protein G affinity chromatography
UniProt	P42226
Localization	Cytoplasmic, nuclear
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT Flow Cytometry : 1-2ug/million cells
Limitations	This STAT6 antibody is available for research use only.



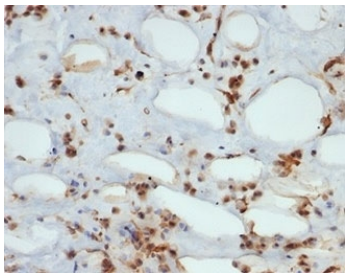
Immunohistochemistry analysis of STAT3 antibody in human renal cell carcinoma tissue (clone STAT6/2410). FFPE human renal cell carcinoma sections demonstrate HRP-DAB brown cytoplasmic and nuclear staining in tumor cells forming glandular and tubular structures. The staining pattern highlights both cytoplasmic localization and nuclear accumulation consistent with activated Signal transducer and activator of transcription 3 in neoplastic epithelial cells. Surrounding stromal components show minimal background staining. Heat induced epitope retrieval was performed in pH 6, 10 mM citrate buffer by boiling tissue sections for 10-20 minutes followed by cooling at room temperature for 20 minutes prior to antibody incubation.



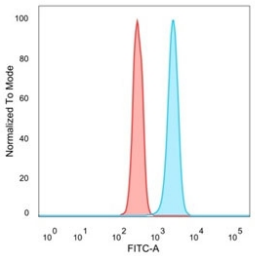
Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using STAT6 antibody (clone STAT6/2410). These results demonstrate the foremost specificity of the STAT6/2410 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free STAT6 antibody (clone STAT6/2410) as confirmation of integrity and purity.



IHC staining of FFPE human liposarcoma tissue with STAT3 antibody (clone STAT6/2410). HIER: boil tissue sections in pH6, 10mM citrate buffer, for 10-20 min followed by cooling at RT for 20 min.



Flow cytometry staining of PFA-fixed human HeLa cells with STAT6 antibody; Red=isotype control, Blue= STAT6 antibody.

Description

STAT6 antibody recognizes Signal Transducer and Activator of Transcription 6, a cytokine-responsive transcription factor encoded by the human STAT6 gene on chromosome 12q13.3. STAT6 is a member of the STAT family of latent cytoplasmic transcription factors that become activated through receptor-associated Janus kinases. In resting cells, STAT6 is primarily localized in the cytoplasm, but following activation it translocates to the nucleus where it regulates gene transcription. STAT6 antibody is commonly used in research focused on IL-4 and IL-13 mediated signaling pathways.

Signal Transducer and Activator of Transcription 6 plays a central role in T helper 2 cell differentiation and allergic inflammation. Upon stimulation of the IL-4 receptor or IL-13 receptor complexes, receptor-associated kinases phosphorylate STAT6 on a conserved tyrosine residue. This phosphorylation promotes STAT6 dimerization via its SH2 domain and subsequent nuclear translocation. In the nucleus, STAT6 binds specific DNA response elements to regulate transcription of genes involved in IgE class switching, mucus production, and Th2 cytokine expression.

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 regions coordinate receptor docking, dimerization, DNA binding, and transcriptional activation. Through these mechanisms, STAT6 integrates extracellular cytokine signals into gene regulatory programs that shape immune responses and tissue remodeling.

STAT6 expression is detected in lymphocytes, dendritic cells, macrophages, and certain epithelial tissues, particularly under cytokine stimulation. Aberrant STAT6 activation has been implicated in asthma, atopic dermatitis, and other allergic diseases. In oncology research, nuclear STAT6 expression is associated with specific tumor subtypes, including solitary fibrous tumors and select soft tissue neoplasms, where it can serve as a useful biomarker in research settings.

Application Notes

Optimal dilution of the STAT6 antibody should be determined by the researcher.

Immunogen

Full length recombinant human protein was used as the immunogen for this STAT6 antibody.

Storage

Store the STAT6 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).