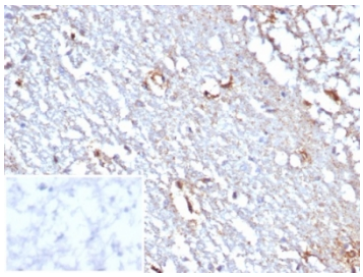
STAT6 Antibody [clone STAT6/7774R] (V4302)

Catalog No.	Formulation	Size
V4302-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4302-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4302SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

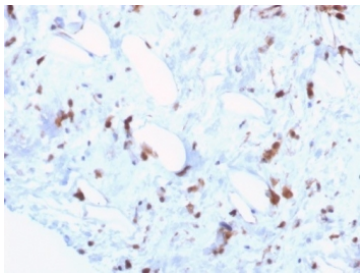
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	STAT6/7774R
Purity	Protein A/G affinity
UniProt	P42226
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This STAT6 antibody is available for research use only.



Immunohistochemistry analysis of STAT6 antibody in human cerebellum tissue (clone STAT6/7774R). FFPE human cerebellum sections demonstrate HRP-DAB brown staining predominantly in the cytoplasm and nuclei of scattered cells within the cerebellar cortex and white matter regions. The staining pattern is consistent with Signal transducer and activator of transcription 6 localization, reflecting its cytoplasmic presence with potential nuclear translocation upon activation. Background neuropil shows minimal non-specific staining. The inset shows PBS used in place of primary antibody as a secondary antibody negative control, demonstrating absence of specific brown staining. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to antibody incubation.



Immunohistochemistry analysis of STAT6 antibody in human liposarcoma tissue (clone STAT6/7774R). FFPE human liposarcoma sections demonstrate HRP-DAB brown nuclear staining in scattered tumor cells within a fibrous stromal background. The predominant nuclear localization is consistent with activated Signal transducer and activator of transcription 6, which translocates to the nucleus upon phosphorylation. Cytoplasmic staining is minimal, and surrounding stromal elements show limited background signal. Heat induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to antibody incubation.

Description

STAT6 antibody recognizes Signal transducer and activator of transcription 6, a cytoplasmic and nuclear transcription factor encoded by the human STAT6 gene located on chromosome 12q13.3. STAT6 is a member of the STAT family of transcription factors, which mediate cytokine signaling and regulate gene expression in immune and inflammatory pathways. STAT6 antibody is widely used to study interleukin-4 and interleukin-13 signaling, where STAT6 functions as a key downstream effector.

Signal transducer and activator of transcription 6 is primarily localized in the cytoplasm in its inactive state and translocates to the nucleus upon phosphorylation. Following stimulation by IL-4 or IL-13 receptors, associated Janus kinases phosphorylate STAT6, leading to dimerization and nuclear translocation. In the nucleus, STAT6 binds specific DNA response elements to regulate transcription of genes involved in Th2 differentiation, immunoglobulin class switching, and allergic inflammation. A STAT6 antibody supports investigation of cytokine-driven transcriptional programs and immune cell activation.

Structurally, STAT6 contains several conserved domains typical of STAT family members, including an N-terminal domain, coiled-coil domain, DNA-binding domain, linker domain, SH2 domain, and a C-terminal transactivation domain. The SH2 domain is critical for receptor-mediated recruitment and dimerization following tyrosine phosphorylation. Through these domains, STAT6 integrates extracellular cytokine signals into gene regulatory responses that influence B cell maturation, T helper cell polarization, and macrophage activation.

STAT6 plays an important role in allergic disease, asthma, and atopic disorders due to its regulation of Th2-associated cytokines and IgE production. In oncology research, STAT6 activation has been implicated in certain lymphomas and solid tumors, where it may contribute to tumor-associated immune modulation. STAT6 expression is observed in various immune cell populations including T lymphocytes, B lymphocytes, and dendritic cells, as well as in select epithelial tissues depending on cytokine exposure.

Clone STAT6/7774R is a recombinant rabbit monoclonal antibody developed to recognize STAT6 for research applications. A STAT6 antibody is suitable for detecting STAT6 expression and localization in studies of cytokine signaling, immune regulation, and inflammation. This antibody targets STAT6 in research settings and supports investigations into Th2 biology, allergic responses, and related signaling pathways.

Application Notes

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

Immunogen

A recombinant partial protein sequence (within amino acids 647-847) from the human protein was used as the immunogen for the STAT6 antibody.

Storage

Aliquot the STAT6 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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