



STAT3 Recombinant Monoclonal Antibody

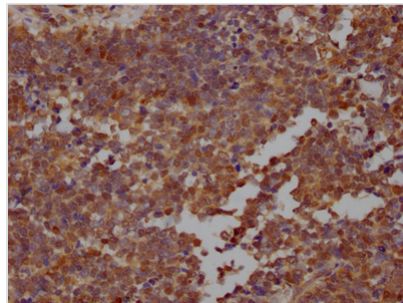
Product Code	CSB-RA188270A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P40763
Immunogen	A synthesized peptide derived from human STAT3
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Signal transducer and transcription activator that mediates cellular responses to interleukins, KITLG/SCF, LEP and other growth factors (PubMed:10688651, PubMed:12359225, PubMed:12873986, PubMed:15194700, PubMed:17344214, PubMed:18242580, PubMed:23084476). Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:17344214). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:12873986). Binds to the interleukin-6 (IL-6)-responsive elements identified in the promoters of various acute-phase protein genes (PubMed:12359225). Activated by IL31 through IL31RA (PubMed:15194700). Acts as a regulator of inflammatory response by regulating differentiation of naive CD4(+) T-cells into T-helper Th17 or regulatory T-cells (Treg): deacetylation and oxidation of lysine residues by LOXL3, leads to disrupt STAT3 dimerization and inhibit its transcription activity (PubMed:28065600). Involved in cell cycle regulation by inducing the expression of key genes for the progression from G1 to S phase, such as CCND1 (PubMed:17344214). Mediates the effects of LEP on melanocortin production, body energy homeostasis and lactation (By similarity). May play an apoptotic role by transactivating BIRC5 expression under LEP activation (PubMed:18242580). Cytoplasmic STAT3 represses macroautophagy by inhibiting EIF2AK2/PKR activity (PubMed:23084476). Plays a crucial role in basal beta cell functions, such as regulation of insulin secretion (By similarity).
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer; Cardiovascular; Developmental biology; Signal transduction; Stem cells



Gene Names STAT3

Clone No. 9F10

Image



IHC image of CSB-RA188270A0HU diluted at 1:100 and staining in paraffin-embedded human lung cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The STAT3 recombinant monoclonal antibody is meticulously produced to ensure its exceptional quality and specificity. The process begins with the isolation of B cells from the spleen of an immunized animal, where the synthesized peptide derived from human STAT3 is used as the immunogen. RNA is extracted from the B cells and converted into cDNA through reverse transcription. The STAT3 antibody genes are amplified using specific primers targeting the antibody constant regions and inserted into an expression vector. This vector is then transfected into host cells to enable the production of the STAT3 recombinant monoclonal antibody. After a period of cell culture, the antibody is harvested from the cell culture supernatant and purified with great care using affinity chromatography. This meticulous purification process ensures the obtainment of a highly purified form of the STAT3 recombinant monoclonal antibody, suitable for various applications. Rigorous characterization assays, including ELISA and IHC analysis, are conducted to validate the antibody's specificity and functionality in detecting human STAT3 protein. The rigorous production process guarantees the development of a reliable and effective STAT3 recombinant monoclonal antibody, making it an invaluable tool in diverse research related to STAT3.