



STAT3 Recombinant Monoclonal Antibody

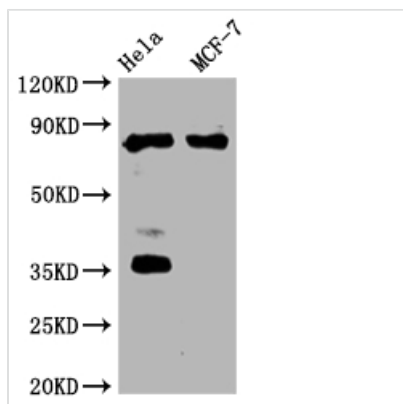
Product Code	CSB-RA229700A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P40763
Immunogen	A synthesized peptide derived from human STAT3
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	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.

3A9

Image

Western Blot

Positive WB detected in: HeLa whole cell lysate, MCF-7 whole cell lysate

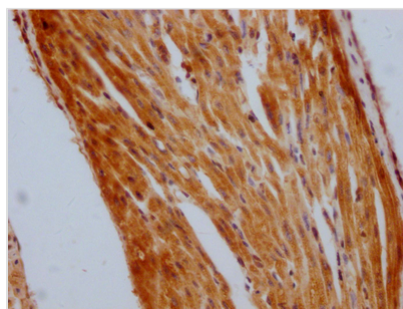
All lanes: STAT3 antibody at 1:2000

Secondary

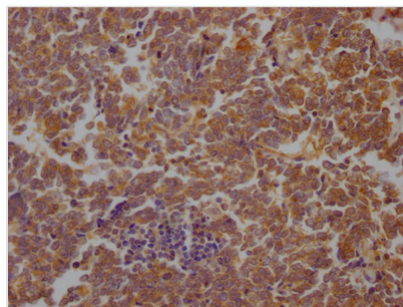
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 89, 88, 84 kDa

Observed band size: 89 kDa



IHC image of CSB-RA229700A0HU diluted at 1:100 and staining in paraffin-embedded human heart tissue 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.



IHC image of CSB-RA229700A0HU 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

CUSABIO employed an immunization strategy, immunizing a rabbit with a synthesized peptide derived from human STAT3, to stimulate an immune response. Splenocytes were isolated from the immunized rabbit, and RNA extraction was performed, followed by reverse transcription to convert RNA into complementary DNA (cDNA). Using degenerate primers, the STAT3 antibody gene was amplified from the synthesized cDNA and inserted into an expression vector. The recombinant vector was then transfected into a host system to produce recombinant monoclonal antibodies targeting STAT3. The resulting antibodies were purified using affinity chromatography from the cell culture supernatant. To validate the specificity and affinity of the STAT3 recombinant monoclonal antibody, ELISA, WB, and IHC applications were conducted, demonstrating their ability to specifically recognize human STAT3 protein.