10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KD-Validated Anti-STAT3 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI1896

Specification

KD-Validated Anti-STAT3 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	P40763
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 88 kDa, observed, 79 kDa KDa**
Gene Name	**STAT3**
Aliases	**STAT3; Signal Transducer And Activator Of Transcription 3; APRF; Acute-Phase Response Factor; Signal Transducer And Activator Of Transcription 3 (Acute-Phase Response Factor); DNA-Binding Protein APRF; ADMIO1; ADMIO; HIES**
Immunogen	**Recombinant protein of human stat3**

KD-Validated Anti-STAT3 Mouse Monoclonal Antibody - Additional Information

Gene ID	**6774**

Other Names
Signal transducer and activator of transcription 3, Acute-phase response factor, STAT3 {ECO:0000303|PubMed:9630560, ECO:0000312|HGNC:HGNC:11364}

KD-Validated Anti-STAT3 Mouse Monoclonal Antibody - Protein Information

Name STAT3 {ECO:0000303|PubMed:9630560, ECO:0000312|HGNC:HGNC:11364}

Function
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:15653507, PubMed:16285960, PubMed:17344214, PubMed:18242580, PubMed:18782771, PubMed:22306293, PubMed:23084476, PubMed:28262505, PubMed:32929201, PubMed:<a

href="http://www.uniprot.org/citations/38404237" target="_blank">38404237). Once activated, recruits coactivators, such as NCOA1 or MED1, to the promoter region of the target gene (PubMed:15653507, PubMed:16285960, PubMed:17344214, PubMed:18782771, PubMed:28262505, PubMed:32929201). May mediate cellular responses to activated FGFR1, FGFR2, FGFR3 and FGFR4 (PubMed:12873986). Upon activation of IL6ST/gp130 signaling by interleukin-6 (IL6), binds to the IL6-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): acetylation promotes its transcription activity and cell differentiation while deacetylation and oxidation of lysine residues by LOXL3 inhibits differentiation (PubMed:28065600, PubMed:28262505). 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 transctivating 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). Following JAK/STAT signaling activation and as part of a complex with NFATC3 and NFATC4, binds to the alpha-beta E4 promoter region of CRYAB and activates transcription in cardiomyocytes (By similarity).

Cellular Location
Cytoplasm. Nucleus Note=Shuttles between the nucleus and the cytoplasm (PubMed:29162862) Translocated into the nucleus upon tyrosine phosphorylation and dimerization, in response to signaling by activated FGFR1, FGFR2, FGFR3 or FGFR4 (PubMed:15653507, PubMed:16285960). Constitutive nuclear presence is independent of tyrosine phosphorylation. Predominantly present in the cytoplasm without stimuli. Upon leukemia inhibitory factor (LIF) stimulation, accumulates in the nucleus. The complex composed of BART and ARL2 plays an important role in the nuclear translocation and retention of STAT3. Identified in a complex with LYN and PAG1. Translocates to the nucleus in the presence of EDN1 (By similarity). {ECO:0000250|UniProtKB:P52631, ECO:0000269|PubMed:15653507, ECO:0000269|PubMed:16285960, ECO:0000269|PubMed:29162862}

Tissue Location
Heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Expressed in naive CD4(+) T cells as well as T-helper Th17, Th1 and Th2 cells (PubMed:31899195)

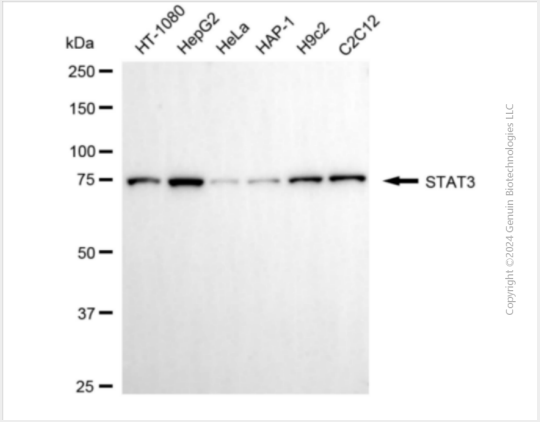
KD-Validated Anti-STAT3 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

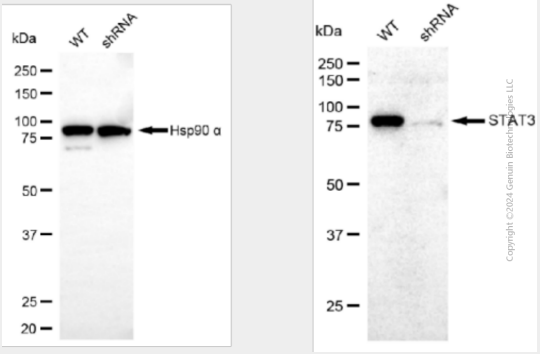
- Western Blot
- Blocking Peptides

- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-STAT3 Mouse Monoclonal Antibody - Images

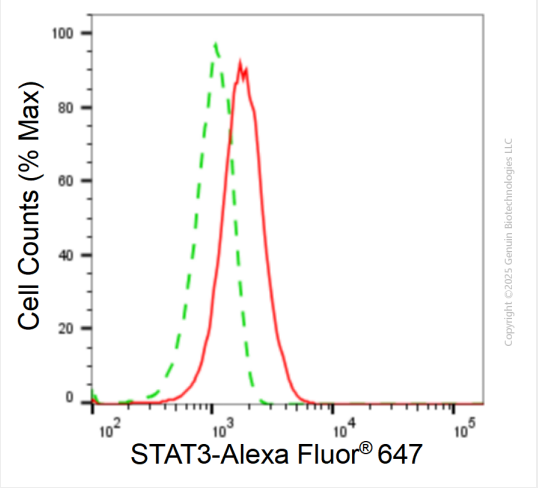


Western blotting analysis using anti-STAT3 antibody (Cat#AGI1896). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-STAT3 antibody (Cat#AGI1896, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

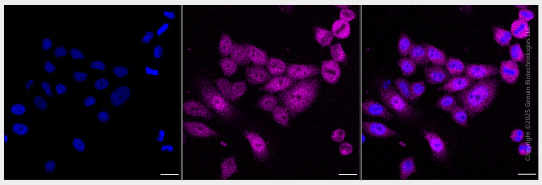


Western blotting analysis using anti-STAT3 antibody (Cat#AGI1896). STAT3 expression in wild type (WT) and STAT3 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-STAT3 antibody (Cat#AGI1896, 1:5,000) and HRP-conjugated goat anti-mouse secondary antibody respectively.

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Flow cytometric analysis of STAT3 expression in HepG2 cells using anti-STAT3 antibody (Cat#AGI1896, 1:2,000). Green, isotype control; red, STAT3.



Immunocytochemical staining of HepG2 cells with anti-STAT3 antibody (Cat#AGI1896, 1:1,000). Nuclei were stained blue with DAPI; STAT3 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and Smart Gain□Medium. Scale bar, 20 µm.