

Purified anti-STAT5 Antibody

Catalog# / Size	660202 / 100 µg
Clone	9C8B50
Regulatory Status	RUO
Other Names	Signal transducer and activator of transcription 5A
Isotype	Mouse IgG2a, κ
Description	STAT5 is a member of the signal transducer and activator of transcription factors (STAT) family, mediating growth and cytokine signaling. STAT5 consists of two closely related family members, STAT5A and STAT5B, which exhibit 96% sequence homology and are functionally redundant. Upon activation, STAT5 is phosphorylated by receptor tyrosine kinases and, in turn, forms homodimers or heterodimers with other family members through its SH2 domains. The dimerized STAT5 translocates to the nucleus and binds to the STAT5 response element (TTCXXGAA). STAT5 plays crucial regulatory roles in cell proliferation, anti-apoptosis, early B cell differentiation, and T cell development.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Partial human STAT5A recombinant protein (627-794 a.a.) expressed in <i>E. coli</i> .
Formulation	This antibody is provided in phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	Affinity purified.
Concentration	0.5 mg/ml
Storage & Handling	Upon receipt, store undiluted between 2°C and 8°C.
Application	WB - Quality tested KO/KD-WB, ICC, IP - Verified
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.1 - 2.0 µg per ml. For immunocytochemistry, the suggested use of this reagent is 1.0 - 5.0 µg per ml. For immunoprecipitation, the suggested use of this reagent is 2.0 - 10.0 µg per ml. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	This clone is not recommended for ChIP (Chromatin Immunoprecipitation) assays (as determined by in-house testing).
Product Citations	1. Zeng H, <i>et al.</i> 2018. <i>Sci Adv.</i> 4:eaar5701. PubMed
RRID	AB_2563469 (BioLegend Cat. No. 660202)

Antigen Details

Structure	794 amino acids, predicted molecular weight of 91 kD; contains a SH2 domains responsible for homodimerization or heterodimerization.
Distribution	Cytoplasm; phosphorylated form translocates to the nucleus.
Function	STAT5 is a transcription regulator and is involved in cell differentiation, proliferation, and survival, in response to several cytokines, such as interleukins, erythropoietin, growth hormone,

thrombopoietin, and prolactin.

Interaction	Forms a homodimer or a heterodimer with other family members. Interacts with NCOA1, SOCS7, CBP, p300, SMRT and ERBB4.
Cell Type	B cells, Tregs
Biology Area	Apoptosis/Tumor Suppressors/Cell Death, Cell Biology, Cell Cycle/DNA Replication, Immunology, Signal Transduction, Transcription Factors
Molecular Family	Nuclear Markers
Antigen References	<ol style="list-style-type: none">1. Bell BD, <i>et al.</i> 2013. <i>Nat. Immunol.</i> 14:364.2. Cholez E, <i>et al.</i> 2012. <i>Leukemia.</i> 26:2390.3. Heltemes-Harris LM, <i>et al.</i> 2012. <i>Curr. Opin. Immunol.</i> 24:146.4. Heltemes-Harris LM, <i>et al.</i> 2011. <i>Ann. N Y Acad. Sci.</i> 1217:18.5. Malin S, <i>et al.</i> 2010. <i>Curr. Opin. Immunol.</i> 22:168.6. Xu J, <i>et al.</i> 2009. <i>J. Neurosci.</i> 29:2022.
Gene ID	6776

Related Protocols

[Immunocytochemistry Staining Protocol](#)

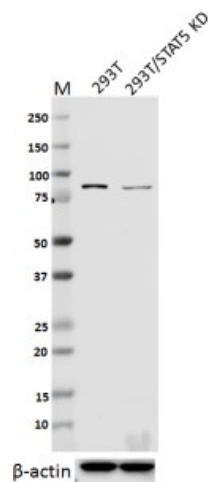
[Western Blotting Protocol](#)

[Immunoprecipitation Protocol](#)

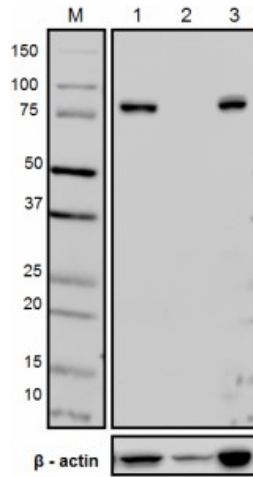
Other Formats

Purified anti-STAT5, Direct-Blot™ HRP anti-STAT5

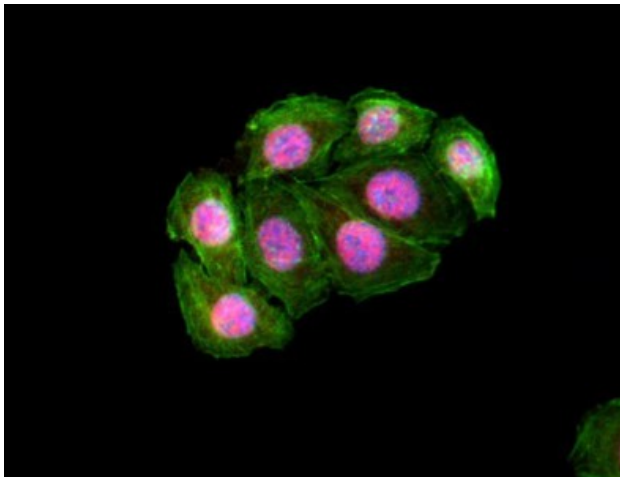
Product Data



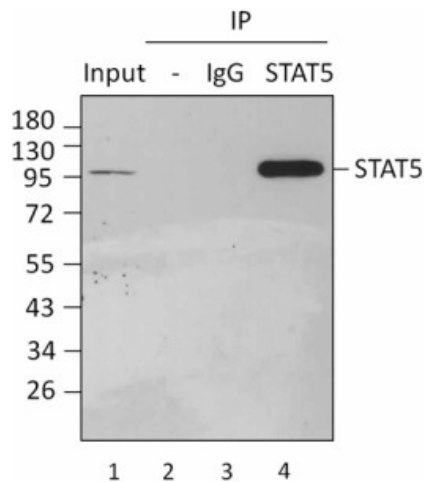
Total lysates (15 μ g protein) from 293T and 293T/STAT5 knockdown (KD) cells were resolved by electrophoresis (4-20% Tris-Glycine gel), transferred to nitrocellulose, and probed with 1:250 diluted (2 μ g/mL) purified anti-STAT5 antibody, clone 9C8B50 (upper). Proteins were visualized using chemiluminescence detection by incubating with 1:3000 dilution of HRP goat anti-mouse-IgG secondary antibody (Cat. No. 405306). 1:2000 dilution of Direct-Blot™ HRP anti- β -actin Antibody (Cat. No. 643807) was used as a loading control (lower). Lane M: MW ladder.



Total lysates (15µg protein) from Jurkat (lane1), PC3 (lane 2) and Raw264.7 (lane 3) cells were resolved by electrophoresis (4-20% Tris-Glycine gel), transferred to nitrocellulose, and probed with 1:1000 diluted (0.5 µg/mL) Purified anti-STAT5 Antibody, clone 9C8B50 (upper). Proteins were visualized by chemiluminescence detection using a 1:3000 diluted anti-Mouse-IgG secondary antibody conjugated to HRP for the anti-STAT5 Antibody or 1:5000 diluted Direct-Blot™ HRP anti-β-Actin Antibody, clone 2F1-1(lower). Lane M: Molecular weight ladder.



Hela cells were fixed with 2% paraformaldehyde (PFA) for 10 minutes, permeabilized with 0.5% Triton X-100 for 5 minutes, and blocked with 5% FBS for 30 minutes. Then the cells were intracellularly stained with 2.5 µg/mL anti-STAT5 Antibody (9C8B50) and followed by DyLight™ 594 goat anti-mouse IgG (red) for 1 hour at room temperature. Actin filaments were labeled with Alexa Fluor® 488 Phalloidin (green). Nuclei were counterstained with DAPI (blue). The image was captured with a 40X objective.



Immunoprecipitation of STAT5 from Jurkat cell extracts. Lane 1 is 8% input. Immunoprecipitation was performed using protein G resins only (lane 2), mouse IgG isotype control (lane 3), and anti-STAT5 antibody (clone 9C8B50, lane 4). Western blot was performed using anti-STAT5 antibody (clone 9C8B50).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587