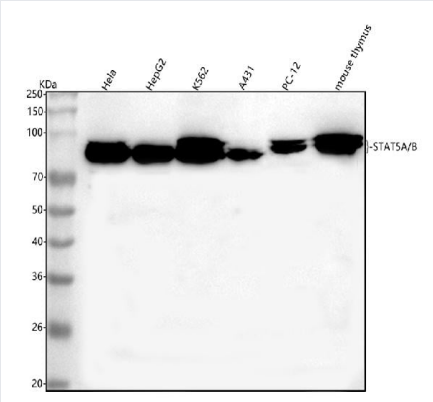
STAT5A/B Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

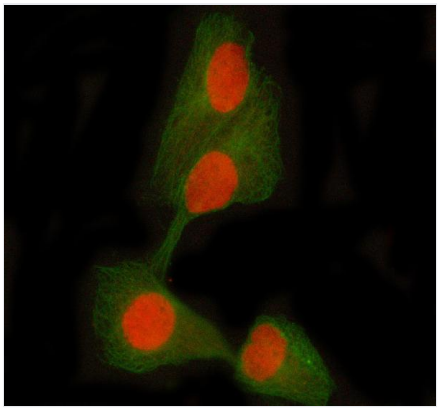
Product Name	STAT5A/B, Polyclonal Antibody
Full Product Name	Anti-STAT5A/B Antibody Picoband
Product Gene Name	anti-STAT5A/B antibody
Product Synonym Names	Serine/threonine-protein kinase AtPK1/AtPK6; 70 kDa ribosomal protein S6 kinase 1 antibody, KS6B1_HUMAN antibody, p70 alpha antibody, P70 beta 1 antibody, p70 ribosomal S6 kinase alpha antibody, p70 ribosomal S6 kinase beta 1 antibody, p70 S6 kinase alpha antibody, P70 S6 Kinase antibody, p70 S6 kinase alpha 1 antibody, p70 S6 kinase alpha 2 antibody, p70 S6K antibody, p70 S6K-alpha antibody, p70 S6KA antibody, p70(S6K) alpha antibody, p70(S6K)-alpha antibody, p70-alpha antibody, p70-S6K 1 antibody, p70-S6K antibody, P70S6K antibody, P70S6K1 antibody, p70S6Kb antibody, PS6K antibody, Ribosomal protein S6 kinase 70kDa polypeptide 1 antibody, Ribosomal protein S6 kinase beta 1 antibody, Ribosomal protein S6 kinase beta-1 antibody, Ribosomal protein S6 kinase I antibody, RPS6KB1 antibody, S6K antibody, S6K-beta-1 antibody, S6K1 antibody, Serine/threonine kinase 14 alpha antibody, Serine/threonine-protein kinase 14A antibody, STK14A antibody
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Expressed in all tissues.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	90,647 Da
Chromosome Location	Chromosome: 17; NC_000017.10 (40439565..40463961). Location: 17q11.2
OMIM	601511
3D Structure	ModBase 3D Structure for P42229
Immunogen	E coli-derived human STAT5A/B recombinant protein (Position: K359-R790). Human STAT5A/B shares 95.8% and 95.6% amino acid (aa) sequence identity with mouse and rat STAT5A/B, respectively.
Subcellular Localization	Cytoplasm, Nucleus
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross reactivity with other proteins.
Protein Function	Downstream effector of TOR signaling pathway involved in osmotic stress response. Could be involved in the control of plant growth and development. Phosphorylates the ribosomal proteins P14, P16 and S6. Functions as a repressor of cell proliferation and required for maintenance of chromosome stability and ploidy levels through the RBR1-E2F pathway.
Product Categories/Family for anti-STAT5A/B antibody	Primary Antibodies; Signal Transduction; Signaling Pathway; Small G Proteins
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.

Applications Tested/Suitable for anti-STAT5A/B antibody	Western Blot (WB), Immunocytochemistry (ICC), Immunofluorescence (IF), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-STAT5A/B antibody	WB: 0.25-0.5ug/ml, Human, Mouse, Rat ICC/IF: 5ug/ml, Human FC/FACS (Fixed): 1-3ug/1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-STAT5A/B antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-STAT5A/B antibody	1. Ambrosio, R., Fimiani, G., Monfregola, J., Sanzari, E., De Felice, N., Salerno, M. C., Pignata, C., D'Urso, M., Ursini, M. V. The structure of human STAT5A and STAT5B genes reveals two regions of nearly identical sequence and an alternative tissue specific STAT5B promoter. Gene 285: 311-318, 2002. 2. Boucheron, C., Dumon, S., Santos, S. C. R., Moriggl, R., Hennighausen, L., Gisselbrecht, S., Gouilleux, F. A single amino acid in the DNA binding regions of STAT5A and STAT5B confers distinct binding specificities. J. Biol. Chem. 273: 33936-33941, 1998. 3. Chan, L. N., Murakami, M. A., Robinson, M. E., Caeser, R., Sadras, T., Lee, J., Cosgun, K. N., Kume, K., Khairnar, V., Xiao, G., Ahmed, M. A., Aghania, E., and 17 others. Signalling input from divergent pathways subverts B cell transformation. Nature 583: 845-851, 2020.
Other Notes	Small volumes of anti-STAT5A/B antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for STAT5A/B purchase	MBS1758151 is an antibody targeting STAT5A/B. Also known as Anti-STAT5A/B Antibody Picoband. Reactive in Human, Mouse, Rat. Host: Rabbit.



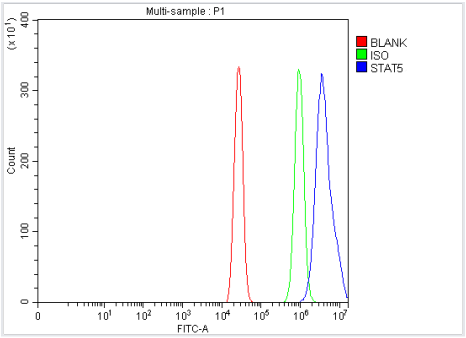
Western Blot (WB) of anti-STAT5A/B antibody

Figure 1. Western blot analysis of STAT5A/B using anti-STAT5A/B antibody (MBS1758151).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human Hela whole cell lysates,Lane 2: human HepG2 whole cell lysates,Lane 3: human K562 whole cell lysates,Lane 4: human A431 whole cell lysates,Lane 5: rat PC-12 whole cell lysates,Lane 6: mouse thymus tissue lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-STAT5A/B antigen affinity purified polyclonal antibody (#MBS1758151) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for STAT5A/B at approximately 90-95 kDa. The expected band size for STAT5A/B is at 91 kDa.



Immunofluorescence (IF) of anti-STAT5A/B antibody

Figure 2. IF analysis of STAT5A/B using anti-STAT5A/B antibody (MBS1758151) and anti-Beta Tubulin antibody (M01857-3).STAT5A/B was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (#MBS176582) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5ug/mL rabbit anti-STAT5A/B Antibody (MBS1758151) and mouse anti-Beta Tubulin antibody (M01857-3) overnight at 4 degree C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) and DyLight488 Conjugated Goat Anti-Mouse IgG (BA1126) were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37 degree C. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry (FC/FACS) of anti-STAT5A/B antibody
Figure 3. Flow Cytometry analysis of A431 cells using anti-STAT5A/B antibody (MBS1758151).Overlay histogram showing A431 cells stained with MBS1758151 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-STAT5A/B Antibody (MBS1758151, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for STAT5A/B. It may not necessarily be applicable to this product.

NCBI GI #	21618342
NCBI GeneID	6776
NCBI Accession #	NP_003143.2
UniProt Primary Accession #	P42229
UniProt Secondary Accession #	P51692
UniProt Related Accession #	P42229
GenBank Nucleotide #	NM_003152.3
NCBI Official Full Name	signal transducer and activator of transcription 5A
NCBI Official Synonym Full Names	signal transducer and activator of transcription 5A
NCBI Official Symbol	STAT5A
NCBI Official Synonym Symbols	MGF; STAT5
UniProt Protein Name	Signal transducer and activator of transcription 5A
UniProt Gene Name	STAT5A
UniProt Synonym Gene Names	STAT5
UniProt Entry Name	STA5A_HUMAN
NCBI Protein Information	signal transducer and activator of transcription 5A
NCBI Summary for STAT5A/B	The protein encoded by this gene is a member of the STAT family of transcription factors. In response to cytokines and growth factors, STAT family members are phosphorylated by the receptor associated kinases, and then form homo- or heterodimers that translocate to the cell nucleus where they act as transcription activators. This protein is activated by, and mediates the responses of many cell ligands, such as IL2, IL3, IL7 GM-CSF, erythropoietin, thrombopoietin, and different growth hormones. Activation of this protein in myeloma and lymphoma associated with a TEL/JAK2 gene fusion is independent of cell stimulus and has been shown to be essential for the tumorigenesis. The mouse counterpart of this gene is found to induce the expression of BCL2L1/BCL-X(L), which suggests the antiapoptotic function of this gene in cells. [provided by RefSeq, Jul 2008]

UniProt Comments for STAT5A/B	STAT5A: transcription factor of the STAT family. Phosphorylated and activated by receptor-associated kinases downstream of many cytokines and growth-factor receptors. Activation of this protein in myeloma and lymphoma associated with a TEL/JAK2 fusion protein is essential for the tumorigenesis. Induces the expression of BCL2L1/BCL-X(L) in the mouse, suggesting an antiapoptotic function of this protein. Forms homo- or heterodimers that translocate into the nucleus where they regulate transcription. Two alternatively spliced isoforms have been described. Protein type: Motility/polarity/chemotaxis; Oncoprotein; Transcription factor; DNA-binding Chromosomal Location of Human Ortholog: 17q11.2 Cellular Component: nucleoplasm; cytosol Molecular Function: signal transducer activity; protein binding; transcription factor activity Biological Process: lactation; succinate metabolic process; peptidyl-tyrosine phosphorylation; oxaloacetate metabolic process; positive regulation of interleukin-2 biosynthetic process; T cell differentiation in the thymus; female pregnancy; positive regulation of multicellular organism growth; fatty acid metabolic process; positive regulation of mitotic cell cycle; positive regulation of activated T cell proliferation; 2-oxoglutarate metabolic process; positive regulation of natural killer cell differentiation; sequestering of lipid; negative regulation of mast cell apoptosis; natural killer cell differentiation; allantoin metabolic process; luteinization; development of secondary male sexual characteristics; regulation of steroid metabolic process; creatinine metabolic process; T cell homeostasis; positive regulation of gamma-delta T cell differentiation; Peyer's patch development; isoleucine metabolic process; negative regulation of erythrocyte differentiation; transcription, DNA-dependent; valine metabolic process; citrate metabolic process; regulation of multicellular organism growth; development of secondary female sexual characteristics; JAK-STAT cascade; positive regulation of natural killer cell mediated cytotoxicity; creatine metabolic process; regulation of transcription from RNA polymerase II promoter; regulation of epithelial cell differentiation; positive regulation of B cell differentiation; positive regulation of transcription from RNA polymerase II promoter; taurine metabolic process; positive regulation of inflammatory response
Research Articles on STAT5A/B	**1.** Fyn regulates the activity of the adipogenic transcription factor signal transducer and activator of transcription 5a (STAT5a) through enhancing its interaction with the GTPase phosphoinositide 3-kinase enhancer A (PIKE-A).
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