JAK3 Blocking Peptide – >85% Purity

PRODUCT OVERVIEW

Product Name	JAK3, Blocking Peptide
Full Product Name	JAK3 Blocking Peptide
Product Gene Name	JAK3 blocking peptide
Product Synonym Names	Tyrosine-protein kinase JAK3; Janus kinase 3; JAK-3; Leukocyte janus kinase; L-JAK
Host	Synthetic
Species Reactivity	Human, Mouse, Monkey
Form/Format	Lyophilized Powder
Purity/Purification	>85%
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Antibody/Peptide Pairs	JAK3 peptide (MBS8243303) is used for blocking the activity of JAK3 antibody (MBS8242536)
Molecular Weight	68,279 Da
OMIM	600173
Quality Control	The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry.
Applications Tested/Suitable for JAK3 blocking peptide	Blocking (BL)
Application Notes for JAK3 blocking peptide	Blocking Peptide to the diluted primary antibody in a molar ratio of 10:1 (peptide to antibody) and incubate the mixture at 4 degree C for overnight or at room temperature for 2 hours.
Related Product Information for JAK3 blocking peptide	MBS8243303 is a blocking peptide targeting JAK3. Reactive in Human, Mouse, Monkey. Host: Synthetic. The peptide is used to block Anti-JAK3 Antibody reactivity.
Other Notes	Small volumes of JAK3 blocking peptide 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for JAK3. It may not necessarily be applicable to this product.

NCBI GI #	50403745
NCBI GeneID	3718
NCBI Accession #	P52333.2
UniProt Primary Accession #	P52333
UniProt Secondary Accession #	Q13259; Q13260; Q13611; Q8N1E8; Q99699; Q9Y6S2
UniProt Related Accession #	P52333
NCBI Official Full Name	Tyrosine-protein kinase JAK3
NCBI Official Synonym Full Names	Janus kinase 3
NCBI Official Symbol	JAK3

NCBI Official Synonym Symbols	JAKL; LJAK; JAK-3; L-JAK; JAK3_HUMAN
UniProt Protein Name	Tyrosine-protein kinase JAK3
UniProt Synonym Protein Names	Janus kinase 3; JAK-3; Leukocyte janus kinase; L-JAK
Protein Family	Tyrosine-protein kinase
UniProt Gene Name	JAK3
UniProt Synonym Gene Names	JAK-3; L-JAK
UniProt Entry Name	JAK3_HUMAN
NCBI Protein Information	tyrosine-protein kinase JAK3
NCBI Summary for JAK3	The protein encoded by this gene is a member of the Janus kinase (JAK) family of tyrosine kinases involved in cytokine receptor-mediated intracellular signal transduction. It is predominantly expressed in immune cells and transduces a signal in response to its activation via tyrosine phosphorylation by interleukin receptors. Mutations in this gene are associated with autosomal SCID (severe combined immunodeficiency disease). [provided by RefSeq, Jul 2008]
UniProt Comments for JAK3	JAK3: a non-receptor tyrosine-kinase of the Jak family expressed predominantly in immune cells. Mediates signal transduction via the common gamma-chain of cytokine receptors, including IL-2, -4, -7, -9, and -15. Interacts with members of the STAT (signal transduction and activators of transcription) family. Interacts with STAM2 and SHB. Contains two protein kinase domains. Mutations that abrogate JAK3 function cause an autosomal SCID (severe combined immunodeficiency disease). Inhibitor: R017s for organ transplants. Three differentially spliced isoforms have been described. Protein type: Protein kinase, TK; Kinase, protein; Protein kinase, tyrosine (non-receptor); EC 2.7.10.2; TK group; JakA family Chromosomal Location of Human Ortholog: 19p13.1 Cellular Component: cytoskeleton; cytosol; endomembrane system; extrinsic to internal side of plasma membrane Molecular Function: ATP binding; non-membrane spanning protein tyrosine kinase activity; protein binding; protein phosphatase binding; protein-tyrosine kinase activity; receptor binding Biological Process: activation of MAPKK activity; adaptive immune response; axon guidance; B cell differentiation; cell migration; elevation of cytosolic calcium ion concentration; enzyme linked receptor protein signaling pathway; epidermal growth factor receptor signaling pathway; fibroblast growth factor receptor signaling pathway; innate immune response; insulin receptor signaling pathway; MAPKKK cascade; negative regulation of dendritic cell cytokine production; negative regulation of FasL biosynthetic process; negative regulation of interleukin-10 production; negative regulation of interleukin-12 production; negative regulation of T cell activation; negative regulation of T-helper 1 cell differentiation; nerve growth factor receptor signaling pathway; peptidyl-tyrosine phosphorylation; positive regulation of activated T cell proliferation; positive regulation of calcium ion transport; positive regulation of immune response; positive regulation of T cell proliferation; protein amino acid phosphorylation; Ras protein signal transduction; small GTPase mediated signal transduction; STAT protein nuclear translocation; T cell homeostasis; tyrosine phosphorylation of STAT protein; tyrosine phosphorylation of Stat5 protein; vascular endothelial growth factor receptor signaling pathway Disease: Severe Combined Immunodeficiency, Autosomal Recessive, T Cell-negative, B Cell-positive, Nk Cell-negative
Research Articles on JAK3	**1.** that JAK3 may contribute to the pathogenesis of pediatric ALL and serve as an important therapeutic target which can be leveraged to improve outcomes for pediatric patients with ALL.
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