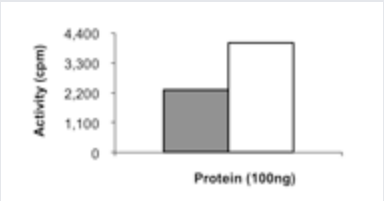
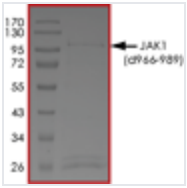
JAK1 Recombinant Protein

PRODUCT OVERVIEW

Product Name	JAK1, Recombinant Protein
Full Product Name	JAK1 Mutant (d966-989) Protein
Product Gene Name	JAK1 recombinant protein
Product Synonym Gene Name	JAK1A; JAK1B
Product Synonym Names	JAK1 (d966-989), Active
Host	Sf9 insect cells using baculovirus
Form/Format	50mM Tris-HCl, pH 7.5, 150mM NaCl, 10mM glutathione, 0.1mM EDTA, 0.25mM DTT, 0.1mM PMSF, 25% glycerol.
Preparation and Storage	Store product at -70 degree C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Molecular Weight	~105 kDa
Sequence Positions	438-end (d966-989)
OMIM	M64174 mRNA
3D Structure	ModBase 3D Structure for P23458
Species	Human
Tag	GST tag
Dry Ice Shipment	Extra charge fee may add to your shipping cost as dry ice is required to ship this product.
Product Categories/Family for JAK1 recombinant protein	Signaling Proteins; Kinase Mutant Proteins
Applications Tested/Suitable for JAK1 recombinant protein	Kinase Assay
Related Product Information for JAK1 recombinant protein	Description: Recombinant human JAK1 (d966-989) (438-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag. Scientific Background: JAK1 is a member of protein-tyrosine kinases (PTK) characterized by the presence of a second phosphotransferase-related domain immediately N-terminal to the PTK domain. JAK1 bears all the hallmarks of a protein kinase, although its structure differs significantly from that of the PTK and threonine/serine kinase family members. JAK1 is a large, widely expressed membrane-associated phosphoprotein that is involved in the interferon-alpha/beta and -gamma signal transduction pathways (1). JAK1 plays an essential and nonredundant role in promoting biologic responses induced by a select subset of cytokine receptors, including those in which JAK utilization is thought to be nonspecific (2).
Product References and Citations for JAK1 recombinant protein	1. Muller, M.et.al: The protein tyrosine kinase JAK1 complements defects in interferon-alpha/beta and -gamma signal transduction. Nature 366: 129-135, 1993. 2. Rodig, S. J.et.al: Disruption of the Jak1 gene demonstrates obligatory and nonredundant roles of the Jaks in cytokine-induced biologic responses. Cell 93: 373-383, 1998.
Other Notes	Small volumes of JAK1 recombinant protein 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 JAK1 purchase	MBS515514 is a recombinant protein targeting JAK1. Also known as JAK1 Mutant (d966-989) Protein. Host: Sf9 insect cells using baculovirus.



Testing Data of JAK1 recombinant protein



Testing Data #2 of JAK1 recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for JAK1. It may not necessarily be applicable to this product.

NCBI GI #	1013393040
NCBI GeneID	3716
NCBI Accession #	NM_002227.3
UniProt Primary Accession #	P23458
UniProt Secondary Accession #	Q59GQ2; Q9UD26
UniProt Related Accession #	P23458
GenBank Nucleotide #	NM_002227
NCBI Official Full Name	Homo sapiens Janus kinase 1 (JAK1), transcript variant 1, mRNA
NCBI Official Synonym Full Names	Janus kinase 1
NCBI Official Symbol	JAK1
NCBI Official Synonym Symbols	JTK3; JAK1A; JAK1B
UniProt Protein Name	Tyrosine-protein kinase JAK1
UniProt Synonym Protein Names	Janus kinase 1; JAK-1
Protein Family	Tyrosine-protein kinase
UniProt Gene Name	JAK1
UniProt Synonym Gene Names	JAK1A; JAK1B; JAK-1
NCBI Protein Information	tyrosine-protein kinase JAK1
NCBI Summary for JAK1	This gene encodes a membrane protein that is a member of a class of protein-tyrosine kinases (PTK) characterized by the presence of a second phosphotransferase-related domain immediately N-terminal to the PTK domain. The encoded kinase phosphorylates STAT proteins (signal transducers and activators of transcription) and plays a key role in interferon-alpha/beta and interferon-gamma signal transduction. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2016]

UniProt Comments for JAK1	JAK1: a widely expressed non-receptor tyrosine-kinase involved in the interferon-alpha/beta and -gamma signal transduction pathways. Couples cytokine ligand binding to tyrosine phosphorylation of various known signaling proteins and of a unique family of transcription factors termed the signal transducers and activators of transcription, or STATs. A selective Jak1 inhibitor induces apoptosis in NRP-154 prostate cancer cell line. A single mutation seen in tyrosine kinome screen of colon cancers. Activated in B cell lines from patients with post-transplant lymphoproliferative disorder, and in a mouse Lck-driven T cell lymphoma. Inhibitor: Piceatannol. Protein type: EC 2.7.10.2; JakA family; Kinase, protein; Protein kinase, TK; Protein kinase, tyrosine (non-receptor); TK group Chromosomal Location of Human Ortholog: 1p31.3 Cellular Component: cytoplasm; cytosol; extrinsic to internal side of plasma membrane; focal adhesion; nucleus Molecular Function: growth hormone receptor binding; non-membrane spanning protein tyrosine kinase activity; protein binding; protein phosphatase binding; protein-tyrosine kinase activity; Ras guanyl-nucleotide exchange factor activity; receptor binding; ubiquitin protein ligase binding Biological Process: cell differentiation; cell migration; innate immune response; MAPKKK cascade; protein amino acid phosphorylation; regulation of cell proliferation; response to antibiotic; transmembrane receptor protein tyrosine kinase signaling pathway
Research Articles on JAK1	**1.** In this structure, the receptor peptide forms an 85-A-long extended chain, in which both the previously identified box1 and box2 regions bind simultaneously to the FERM and SH2-like domains of JAK1.
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