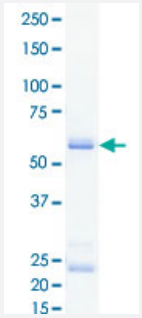
Bioactive

JAK1 (Human) Recombinant Protein

Catalog # P5568 Size 5 ug

Applications



Result of activity analysis

Result of activity analysis

Specification

Product Description	Human JAK1 (NP_002218.2, 850 a.a. - 1154 a.a.) partial recombinant protein with GST tag expressed in baculovirus infected Sf21 cells.
Host	insect
Theoretical MW (kDa)	62
Form	Liquid
Preparation Method	Baculovirus infected insect cell (Sf21) expression system
Purification	Glutathione sepharose chromatography
Purity	73 % by SDS-PAGE/CBB staining

Activity	The activity was measured by off-chip mobility shift assay. The enzyme was incubated with fluorescence-labeled substrate and Mg(or Mn)/ATP. The phosphorylated and unphosphorylated substrates were separated and detected by LabChip 3000. Substrate: JAK1 substrate peptide. ATP: 100 uM.
Quality Control Testing	Loading 1 ug protein in SDS-PAGE
Storage Buffer	In 50 mM Tris-HCl, 150 mM NaCl, pH 7.5 (0.1% CHAPS, 1 mM DTT, 10% glycerol)
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Result of activity analysis Result of activity analysis

Applications

- Functional Study
- SDS-PAGE

Gene Info — JAK1

Entrez GeneID	3716
Protein Accession#	NP_002218.2
Gene Name	JAK1
Gene Alias	JAK1A, JAK1B, JTK3
Gene Description	Janus kinase 1 (a protein tyrosine kinase)
Omim ID	147795
Gene Ontology	Hyperlink

Gene Summary	Janus kinase 1 (JAK1), is a member of a new class of protein-tyrosine kinases (PTK) characterized by the presence of a second phosphotransferase-related domain immediately N-terminal to the PTK domain. The second phosphotransferase domain 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. JAK1 is involved in the interferon-alpha/beta and -gamma signal transduction pathways. The reciprocal interdependence between JAK1 and TYK2 activities in the interferon-alpha pathway, and between JAK1 and JAK2 in the interferon-gamma pathway, may reflect a requirement for these kinases in the correct assembly of interferon receptor complexes. These kinases couple 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. [provided by RefSeq
Other Designations	OTTHUMP00000010896|janus kinase 1

Pathway

- Jak-STAT signaling pathway
- Pancreatic cancer
- Pathways in cancer

Disease

- Asthma
- Bronchiolitis
- Carcinoma
- Cardiovascular Diseases
- Diabetes Mellitus
- Disease Progression
- Disease Susceptibility
- Edema
- Genetic Predisposition to Disease
- Hepatitis B
- Hepatitis C

- HIV Infections
- Infant
- Leukemia
- Leukemia-Lymphoma
- Liver Cirrhosis
- Liver Neoplasms
- Lymphoproliferative Disorders
- Multiple Sclerosis
- Myelodysplastic Syndromes
- Myelofibrosis
- Neoplasms
- Neutropenia
- Polycythemia Vera
- Precursor T-Cell Lymphoblastic Leukemia-Lymphoma
- Respiratory Syncytial Virus Infections
- Thrombocytopenia
- Thyroid Neoplasms
- Tobacco Use Disorder
- Viremia