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Mouse Jak3 Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP14261a

Specification

Mouse Jak3 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q62137

Mouse Jak3 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 16453

Other Names
Tyrosine-protein kinase JAK3, Janus kinase 3, JAK-3, Jak3

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Mouse Jak3 Antibody (N-term) Blocking Peptide - Protein Information

Name Jak3 {ECO:0000312|MGI:MGI:99928}

Function
Non-receptor tyrosine kinase involved in various processes such as cell growth, development, or differentiation (PubMed:20696842). Mediates essential signaling events in both innate and adaptive immunity and plays a crucial role in hematopoiesis during T-cells development. In the cytoplasm, plays a pivotal role in signal transduction via its association with type I receptors sharing the common subunit gamma such as IL2R, IL4R, IL7R, IL9R, IL15R and IL21R. Following ligand binding to cell surface receptors, phosphorylates specific tyrosine residues on the cytoplasmic tails of the receptor, creating docking sites for STATs proteins. Subsequently, phosphorylates the STATs proteins once they are recruited to the receptor. Phosphorylated STATs then form homodimer or heterodimers and translocate to the nucleus to activate gene transcription. For example, upon IL2R activation by IL2, JAK1 and JAK3 molecules bind to IL2R beta (IL2RB) and gamma chain (IL2RG) subunits inducing the tyrosine phosphorylation of both receptor subunits on their cytoplasmic domain. Then, STAT5A and STAT5B are recruited, phosphorylated and activated by JAK1 and JAK3. Once activated, dimerized STAT5 translocates to the nucleus and promotes the transcription of specific target genes in a cytokine-specific fashion.

Cellular Location
Endomembrane system; Peripheral membrane protein. Cytoplasm

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Tissue Location
In contrast with the ubiquitous expression of the other JAKs, JAK3 is predominantly expressed in hematopoietic tissues

Mouse Jak3 Antibody (N-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

Mouse Jak3 Antibody (N-term) Blocking Peptide - Images

Mouse Jak3 Antibody (N-term) Blocking Peptide - Background

Tyrosine kinase of the non-receptor type, involved in the interleukin-2 and interleukin-4 signaling pathway. Phosphorylates STAT6, IRS1, IRS2 and PI3K.

Mouse Jak3 Antibody (N-term) Blocking Peptide - References

Martin, P., et al. Mol. Cell. Biol. 30(20):4877-4889(2010)Lange, C., et al. J. Neurochem. 113(5):1210-1220(2010)Shi, M., et al. J. Immunol. 183(7):4493-4501(2009)Chang, B.Y., et al. J. Immunol. 183(3):2183-2192(2009)Rivas-Caicedo, A., et al. PLoS ONE 4 (9), E7066 (2009) :