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JIK Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP7902a

Specification

JIK Antibody (C-term) Blocking Peptide - Product Information

Primary Accession	Q9H2K8
Other Accession	Q9UHG7

JIK Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 51347

Other Names
Serine/threonine-protein kinase TAO3, Cutaneous T-cell lymphoma-associated antigen HD-CL-09, CTCL-associated antigen HD-CL-09, Dendritic cell-derived protein kinase, JNK/SAPK-inhibitory kinase, Jun kinase-inhibitory kinase, Kinase from chicken homolog A, hKFC-A, Thousand and one amino acid protein 3, TAOK3, DPK, JIK, KDS, MAP3K18

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7902a was selected from the C-term region of human JIK . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

JIK Antibody (C-term) Blocking Peptide - Protein Information

Name TAOK3

Synonyms DPK, JIK, KDS, MAP3K18

Function
Serine/threonine-protein kinase that acts as a regulator of the p38/MAPK14 stress-activated MAPK cascade and of the MAPK8/JNK cascade. In response to DNA damage, involved in the G2/M transition DNA damage checkpoint by activating the p38/MAPK14 stress-activated MAPK cascade, probably by mediating phosphorylation of upstream MAP2K3 and MAP2K6 kinases. Inhibits basal activity of the MAPK8/JNK cascade and diminishes its activation in response to epidermal growth factor (EGF). Positively regulates canonical T cell receptor (TCR) signaling by preventing early

PTPN6/SHP1-mediated inactivation of LCK, ensuring sustained TCR signaling that is required for optimal activation and differentiation of T cells (PubMed:30373850). Phosphorylates PTPN6/SHP1 on 'Thr-394', leading to its polyubiquitination and subsequent proteasomal degradation (PubMed:38166031). Required for cell surface expression of metalloprotease ADAM10 on type 1 transitional B cells which is necessary for their NOTCH-mediated development into marginal zone B cells (By similarity). Also required for the NOTCH-mediated terminal differentiation of splenic conventional type 2 dendritic cells (By similarity). Positively regulates osteoblast differentiation by acting as an upstream activator of the JNK pathway (PubMed:32807497). Promotes JNK signaling in hepatocytes and positively regulates hepatocyte lipid storage by inhibiting beta-oxidation and triacylglycerol secretion while enhancing lipid synthesis (PubMed:34634521). Restricts age-associated inflammation by negatively regulating differentiation of macrophages and their production of pro- inflammatory cytokines (By similarity). Plays a role in negatively regulating the abundance of regulatory T cells in white adipose tissue (By similarity).

Cellular Location
Cytoplasm. Cell membrane; Peripheral membrane protein. Membrane raft. Lipid droplet. Note=Located primarily outside cell membrane rafts and remains outside upon canonical TCR ligation (PubMed:30373850). A small pool is detectable in cell membrane rafts in resting conditions but relocates outside the rafts upon TCR signaling (PubMed:30373850). Localizes to lipid droplets in hepatocytes (PubMed:34634521).

Tissue Location
Ubiquitously expressed at a low level, and highly expressed in peripheral blood leukocytes (PBLs), thymus, spleen, kidney, skeletal muscle, heart and liver.

JIK Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

JIK Antibody (C-term) Blocking Peptide - Images

JIK Antibody (C-term) Blocking Peptide - Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains.

JIK Antibody (C-term) Blocking Peptide - References

Blume-Jensen P, et al. Nature 2001. 411: 355.Cantrell D, J. Cell Sci. 2001. 114: 1439.Jhiang S Oncogene 2000. 19: 5590.Manning G, et al. Science 2002. 298: 1912.Moller, D, et al. Am. J. Physiol. 1994. 266: C351-C359.Robertson, S. et al. Trends Genet. 2000. 16: 368.Robinson D, et al. Oncogene 2000. 19: 5548.Van der Ven, P, et al. Hum. Molec. Genet. 1993. 2: 1889.Vanhaesebroeck, B, et al. Biochem. J. 2000. 346: 561.Van Weering D, et al. Recent Results Cancer Res. 1998. 154: 271.