

TAOK3 / JIK Antibody (Internal)

Goat Polyclonal Antibody Catalog # ALS12286

Specification

TAOK3 / JIK Antibody (Internal) - Product Information

Application WB, IHC-P, E
Primary Accession Q9H2K8

Reactivity Human, Rabbit, Pig, Horse, Bovine

Host
Clonality
Polyclonal
Calculated MW
Dilution
WB~~1:1000
IHC-P~~N/A

E~~N/A

TAOK3 / JIK Antibody (Internal) - Additional Information

Gene ID 51347

Other Names

Serine/threonine-protein kinase TAO3, 2.7.11.1, 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

Human TAOK3.

Reconstitution & Storage

Store at -20°C. Minimize freezing and thawing.

Precautions

TAOK3 / JIK Antibody (Internal) is for research use only and not for use in diagnostic or therapeutic procedures.

TAOK3 / JIK Antibody (Internal) - 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/a>). 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.

TAOK3 / JIK Antibody (Internal) - Protocols

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

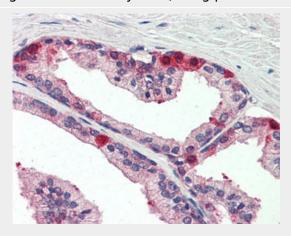
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- <u>Immunofluorescence</u>
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

TAOK3 / JIK Antibody (Internal) - Images





Antibody (0.1 ug/ml) staining of human liver lysate (35 ug protein in RIPA buffer).



Anti-TAOK3 antibody IHC of human prostate.

TAOK3 / JIK Antibody (Internal) - Background

Serine/threonine-protein kinase that acts as a regulator of the p38/MAPK14 stress-activated MAPK cascade and of the MAPK8/JNK cascade. Acts as an activator of the p38/MAPK14 stress- activated MAPK 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 MAPK8/JNK cascade and diminishes its activation in response epidermal growth factor (EGF).

TAOK3 / JIK Antibody (Internal) - References

Tassi E., et al.J. Biol. Chem. 274:33287-33295(1999). Zhang W., et al.Biochem. Biophys. Res. Commun. 274:872-879(2000). Yustein J.T., et al.Oncogene 22:6129-6141(2003). Carter T.G., et al.Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases. Kalnine N., et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.