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DGKZ Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP8060a

Specification

DGKZ Antibody (N-term) Blocking Peptide - Product Information

Primary Accession Q13574

DGKZ Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 8525

Other Names
Diacylglycerol kinase zeta, DAG kinase zeta, Diglyceride kinase zeta, DGK-zeta, DGKZ, DAGK6

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8060a was selected from the N-term region of human DGKZ . 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.

DGKZ Antibody (N-term) Blocking Peptide - Protein Information

Name DGKZ (HGNC:2857)

Synonyms DAGK6

Function
Diacylglycerol kinase that converts diacylglycerol/DAG into phosphatidic acid/phosphatidate/PA and regulates the respective levels of these two bioactive lipids (PubMed:9159104, PubMed:15544348, PubMed:18004883, PubMed:19744926, PubMed:22108654, PubMed:22627129, PubMed:23949095). Thereby, acts as a central switch between the signaling pathways activated by these second messengers

with different cellular targets and opposite effects in numerous biological processes (PubMed:9159104, PubMed:15544348, PubMed:18004883, PubMed:19744926, PubMed:22108654, PubMed:22627129, PubMed:23949095). Also plays an important role in the biosynthesis of complex lipids (Probable). Does not exhibit an acyl chain-dependent substrate specificity among diacylglycerol species (PubMed:9159104, PubMed:19744926, PubMed:22108654). Can also phosphorylate 1-alkyl-2-acylglycerol in vitro but less efficiently and with a preference for alkylacylglycerols containing an arachidonoyl group (PubMed:15544348, PubMed:19744926, PubMed:22627129). The biological processes it is involved in include T cell activation since it negatively regulates T-cell receptor signaling which is in part mediated by diacylglycerol (By similarity). By generating phosphatidic acid, stimulates PIP5KIA activity which regulates actin polymerization (PubMed:15157668). Through the same mechanism could also positively regulate insulin-induced translocation of SLC2A4 to the cell membrane (By similarity).

Cellular Location
Nucleus. Cytoplasm, cytosol. Cell membrane. Cell projection, lamellipodium

Tissue Location
Highest levels in brain, and substantial levels in skeletal muscle, heart, and pancreas.

DGKZ Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

DGKZ Antibody (N-term) Blocking Peptide - Images

DGKZ Antibody (N-term) Blocking Peptide - Background

Diacylglycerol (DAG) is an allosteric activator of protein kinase C. DAG also participates in regulating RAS and RHO family proteins by activating the guanine nucleotide exchange factors VAV and RASGRP1. DAG is also involved in the synthesis of phospholipids and triacylglycerols. Tight regulation of DAG levels is achieved via DAG kinases (DGKs), which remove DAG by phosphorylate it to phosphatidic acid. Several mammalian isozymes of DAGK have been identified

DGKZ Antibody (N-term) Blocking Peptide - References

Hogan, A., et al., J. Biol. Chem. 276(28):26526-26533 (2001).Topham, M.K., et al., Nature 394(6694):697-700 (1998).Ding, L., et al., Proc. Natl. Acad. Sci. U.S.A. 94(11):5519-5524 (1997).Bunting, M., et al., J. Biol. Chem. 271(17):10230-10236 (1996).