10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

DGKQ Antibody (N-term) Blocking Peptide

Synthetic peptide
Catalog # BP8122a

Specification

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

Primary Accession P52824

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

Gene ID 1609

Other Names
Diacylglycerol kinase theta, DAG kinase theta, Diglyceride kinase theta, DGK-theta, DGKQ, DAGK4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8122a was selected from the N-term region of human DGKQ . 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.

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

Name DGKQ (HGNC:2856)

Function
Diacylglycerol kinase that converts diacylglycerol/DAG into phosphatidic acid/phosphatidate/PA and regulates the respective levels of these two bioactive lipids (PubMed:9099683, PubMed:11309392, PubMed:22627129). 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:11309392, PubMed:17664281, PubMed:26748701). Within the adrenocorticotropic hormone signaling pathway, produces phosphatidic acid which in turn activates NR5A1 and subsequent steroidogenic gene transcription (PubMed:<a

href="http://www.uniprot.org/citations/17664281" target="_blank">17664281). Also functions downstream of the nerve growth factor signaling pathway being specifically activated in the nucleus by the growth factor (By similarity). Through its diacylglycerol activity also regulates synaptic vesicle endocytosis (PubMed:26748701).

Cellular Location
Cytoplasm. Cytoplasm, cytosol {ECO:0000250|UniProtKB:Q6P5E8}. Cell membrane. Synapse {ECO:0000250|UniProtKB:Q6P5E8}. Cytoplasm, cytoskeleton. Nucleus Nucleus speckle. Nucleus matrix {ECO:0000250|UniProtKB:D3ZEY4}. Note=Translocates to the plasma membrane in response to steroid hormone receptor stimulation (PubMed:15632189). Translocation to the plasma membrane is dependent on G-protein coupled receptor stimulation and subsequent activation of PRKCE and probably PRKCH (PubMed:15632189). Translocates to the nucleus in response to thrombin stimulation (Probable). Association with the nuclear matrix is regulated by nerve growth factor (By similarity) {ECO:0000250|UniProtKB:D3ZEY4, ECO:0000269|PubMed:15632189, ECO:0000305|PubMed:11309392}

DGKQ Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

DGKQ Antibody (N-term) Blocking Peptide - Images

DGKQ 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.The predicted 882-amino acid human DGKQ (DGK-theta) protein is 90% identical in sequence to the rat homolog. DGK-theta is comprised of a pleckstrin homology domain and the conserved DGK putative catalytic domain. In contrast to other DGK isotypes, DGK-theta contains 3 rather than 2 cysteine-rich zinc-binding domains, an N-terminal proline- and glycine-rich region, and a RAS-associating domain. Highest tissue expression in the rat is in the brain. Defects in eye-specific DAGK genes cause retinal degeneration in Drosophila; thus, DAGK genes are candidates for human eye disease.

DGKQ Antibody (N-term) Blocking Peptide - References

Pilz, A., et al., Genomics 26(3):599-601 (1995).