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Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide

Synthetic peptide
Catalog # BP8123b

Specification

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - Product Information

Primary Accession O75912

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - Additional Information

Gene ID 9162

Other Names
Diacylglycerol kinase iota, DAG kinase iota, Diglyceride kinase iota, DGK-iota, DGKI

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8123b was selected from the C-term region of human DGKI . 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.

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - Protein Information

Name DGKI (HGNC:2855)

Function
Diacylglycerol kinase that converts diacylglycerol/DAG into phosphatidic acid/phosphatidate/PA and regulates the respective levels of these two bioactive lipids (PubMed:23949095, PubMed:9830018). 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 (Probable). Has probably no preference for any of the diacylglycerols in terms of the acyl chain composition, especially for the acyl chain at the sn-2 position (PubMed:9830018). By controlling

the diacylglycerol/DAG- mediated activation of RASGRP3, negatively regulates the Rap1 signaling pathway. May play a role in presynaptic diacylglycerol/DAG signaling and control neurotransmitter release during metabotropic glutamate receptor-dependent long-term depression (By similarity).

Cellular Location
Cell projection, axon {ECO:0000250|UniProtKB:F1MAB7}. Cell projection, dendrite {ECO:0000250|UniProtKB:F1MAB7}. Presynapse {ECO:0000250|UniProtKB:F1MAB7}. Postsynapse {ECO:0000250|UniProtKB:F1MAB7}. Postsynaptic density {ECO:0000250|UniProtKB:F1MAB7}. Synaptic cell membrane {ECO:0000250|UniProtKB:F1MAB7}. Cytoplasmic vesicle, secretory vesicle, synaptic vesicle membrane {ECO:0000250|UniProtKB:F1MAB7}. Cytoplasm, cytosol. Nucleus. Note=Excluded from inhibitory synapses (By similarity). Localization between cytoplasm and nucleus is regulated by protein kinase C (PubMed:9830018). Both in the detergent soluble and particulate fractions (By similarity) {ECO:0000250|UniProtKB:F1MAB7, ECO:0000269|PubMed:9830018}

Tissue Location
Specifically expressed in brain and retina (PubMed:9830018). In brain, highly expressed in hippocampus, caudate nucleus, occipital pole, cerebral cortex, and cerebellum (PubMed:9830018). Also detected in kidney (PubMed:15894621)

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - Protocols

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

- Blocking Peptides

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - Images

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - Background

DGKI a member of the type IV diacylglycerol kinase subfamily. Diacylglycerol kinases regulate the intracellular concentration of diacylglycerol through its phosphorylation, producing phosphatidic acid. The specific role of the enzyme encoded by this gene is undetermined, however, it may play a crucial role in the production of phosphatidic acid in the retina or in recessive forms of retinal degeneration.

Diacylglycerol kinase iota (DGKI) Antibody (C-term) Blocking peptide - References

Ding, L., et al., J. Biol. Chem. 273(49):32746-32752 (1998).Bowne, S.J., et al., Mol. Vis. 6, 6-9 (2000).