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

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8123b

Product Information

Application	WB, IHC-P, E
Primary Accession	O75912
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3827
Calculated MW	116233
Antigen Region	890-920

Additional Information

Gene ID	9162
Other Names	Diacylglycerol kinase iota, DAG kinase iota, Diglyceride kinase iota, DGK-iota, DGKI
Target/Specificity	This Diacylglycerol kinase iota (DGKI) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 890-920 amino acids from the C-terminal region of human Diacylglycerol kinase iota (DGKI).
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Diacylglycerol kinase iota (DGKI) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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)

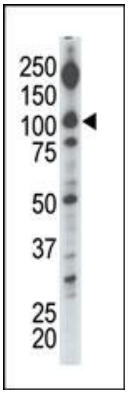
Background

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.

References

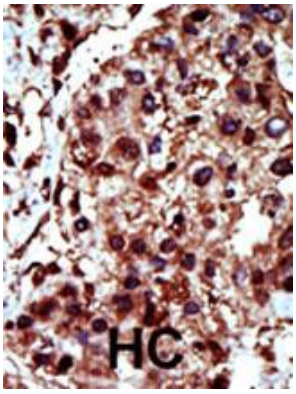
Ding, L., et al., J. Biol. Chem. 273(49):32746-32752 (1998).
Bowne, S.J., et al., Mol. Vis. 6, 6-9 (2000).

Images

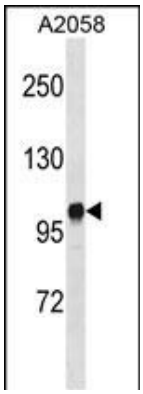


The anti-DGKI Pab (Cat. #AP8123b) is used in Western blot to detect DGKI in mouse cerebellum tissue lysate.

Formalin-fixed and paraffin-embedded human cancer



tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



DGKI Antibody (Y905) (Cat. #AP8123b) western blot analysis in A2058 cell line lysates (35ug/lane).This demonstrates the DGKI antibody detected the DGKI protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.