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

DGK-θ Polyclonal Antibody

Catalog # AP69520

Product Information

Application	WB, IHC-P, IF, ICC, E
Primary Accession	P52824
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	101155

Additional Information

Gene ID	1609
Other Names	DGKQ; DAGK4; Diacylglycerol kinase theta; DAG kinase theta; Diglyceride kinase theta; DGK-theta
Dilution	WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

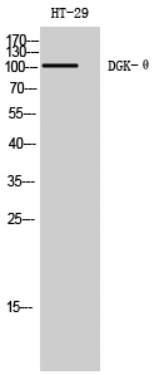
Name	DGKQ (HGNC:2856)
Function	Diacylglycerol kinase that converts diacylglycerol/DAG into phosphatidic acid/phosphatidate/PA and regulates the respective levels of these two bioactive lipids (PubMed:11309392, PubMed:22627129, PubMed:9099683). Thereby, acts as a central switch between the signaling pathways 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: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}

Background

Phosphorylates diacylglycerol (DAG) to generate phosphatidic acid (PA). May regulate the activity of protein kinase C by controlling the balance between these two signaling lipids. Activated in the nucleus in response to alpha-thrombin and nerve growth factor (By similarity). May be involved in cAMP- induced activation of NR5A1 and subsequent steroidogenic gene transcription by delivering PA as ligand for NR5A1. Acts synergistically with NR5A1 on CYP17 transcriptional activity.

Images



Western Blot analysis of HT-29 cells using DGK-θ Polyclonal Antibody