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

Anti-DGK zeta Antibody

Catalog # AP61386

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q13574
Reactivity	Human, Mouse, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	103981

Additional Information

Gene ID	8525
Other Names	DAGK6; Diacylglycerol kinase zeta; DAG kinase zeta; Diglyceride kinase zeta; DGK-zeta
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human DGK zeta. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000), IHC (1/50 - 1/200) IHC~~WB (1/500 - 1/1000), IHC (1/50 - 1/200) IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

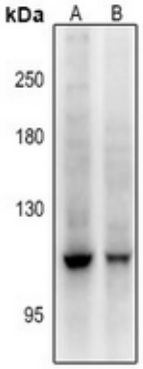
Name	DGKZ (HGNC:2857)
Synonyms	DAGK6
Function	Diacylglycerol kinase that converts diacylglycerol/DAG into phosphatidic acid/phosphatidate/PA and regulates the respective levels of these two bioactive lipids (PubMed:15544348, PubMed:18004883, PubMed:19744926, PubMed:22108654, PubMed:22627129, PubMed:23949095, PubMed:9159104). 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:15544348, PubMed:18004883, PubMed:19744926, PubMed:22108654, PubMed:22627129, PubMed:23949095, PubMed:9159104). 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:19744926, PubMed:22108654, PubMed:9159104). 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).

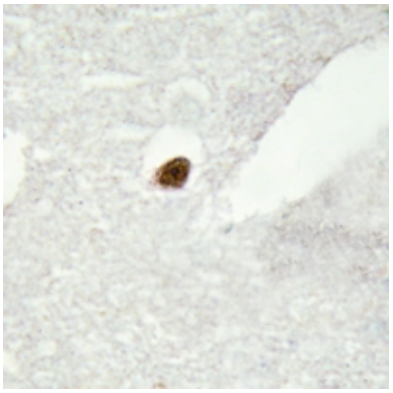
Cellular Location Nucleus. Cytoplasm, cytosol. Cell membrane. Cell projection, lamellipodium

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

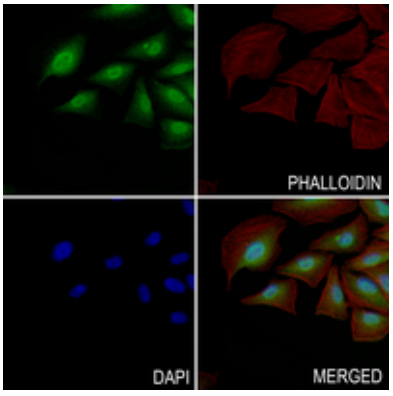
Images



Western blot analysis of DGK zeta expression in A549 (A), BV2 (B) whole cell lysates. (Predicted band size: 103 kD; Observed band size: 115 kD)

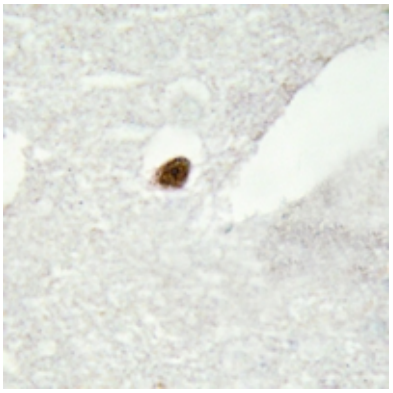


Immunohistochemical analysis of DGK zeta staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of DGK zeta staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Immunohistochemical analysis of DGK zeta staining in human brain formalin fixed paraffin embedded tissue



section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

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