



DGK- ι (N-16): sc-27849

BACKGROUND

Diacylglycerol (DAG) influences numerous cell signaling cascades by functioning as an intracellular, allosteric activator of protein kinase C (PKC), and as a potent activator of guanine nucleotide exchange factors (1,2). In order to maintain cellular homeostasis, intracellular DAG levels are tightly regulated by diacylglycerol kinases (DGKs, DAGKs), which phosphorylate DAG to phosphatidic acid, thus removing DAG (3,4). Human DGK-alpha (80 kDa), -beta (90 kDa), and -gamma (90 kDa) have calcium-binding EF-hand motifs at their N termini and are classified as type I DGKs (5). Human DGK-delta (130 kDa) and DGK-eta (130 kDa) contain N-terminal pleckstrin homology (PH) domains and are classified as type II (5). Human DGK-epsilon (64 kDa) contains no identifiable regulatory domains and is classified as a type III DGK (5). Human DGK-zeta (104 kDa) and -iota (130 kDa) possess C-terminal ankyrin repeats and are classified as type IV DGKs (5). Human DGK-theta (110 kDa) contains 3 cysteine-rich domains and a PH domain and is classified as a type V DGK (5).

SOURCE

DGK- ι (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the amino terminus of DGK- ι of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS containing 0.1% sodium azide and 0.2% gelatin.

Blocking peptide is available for competition studies (sc-27849 P) (100 μ g peptide in 0.5 ml PBS with 0.1% sodium azide and 100 μ g BSA).

STORAGE

Store at 4° C, do not freeze; stable for one year from the date of shipment.

SPECIFICITY

DGK- ι (N-16) is recommended for the detection of DGK2 (iota) of mouse, rat and human origin by Western blotting and immunohistochemistry.

Recommended dilution range for Western blot analysis: 1:100–1:1000. Recommended starting dilution: 1:100.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

BACKGROUND REFERENCES

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2. Sakane, F. and Kanoh, H. 1997. Molecules in focus: diacylglycerol kinase. *Int. J. Biochem. Cell Biol.* **29**: 1139-1143.
3. Topham, M.K. and Prescott, S.M. 1999. Mammalian diacylglycerol kinases, a family of lipid kinases with signaling functions. *J. Biol. Chem.* **274**: 11447-11450.
4. Hodgkin, M.N., Pettitt, T.R., Martin, A., and Wakelam, M.J. 1996. Regulation of 'signalling diacylglycerol' in cells: the importance of diacylglycerol kinase. *Biochem. Soc. Trans.* **24**: 991-994.
5. Online Mendelian Inheritance in Man, OMIM (TM). Johns Hopkins University, Baltimore, MD. MIM Number: 125855: 01/05/2000: . World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

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