

DGK- κ (T-13): sc-167627

BACKGROUND

Diacylglycerol kinase plays an important role in signal transduction through regulating the balance between two signaling lipids, diacylglycerol (DAG) and phosphatidic acid (PA). DGK- κ (diacylglycerol kinase κ), also known as DGKK, 142 kDa diacylglycerol kinase or diglyceride kinase κ , is a 1,271 amino acid protein belonging to the eukaryotic diacylglycerol kinase family. DGK- κ contains one DAGKc domain, one PH domain and two phorbol-ester/DAG-type zinc fingers. DGK- κ generates PA by phosphorylating DAG and is inhibited in response to hydrogen peroxide. A peripheral membrane protein, DGK- κ does not form homooligomers and is expressed in testis, with lower levels in placenta.

REFERENCES

1. Itani, S.I., et al. 2002. Lipid-induced Insulin resistance in human muscle is associated with changes in diacylglycerol, protein kinase C, and I κ B- α . *Diabetes* 51: 2005-2011.
2. Imai, S., et al. 2005. Identification and characterization of a novel human type II diacylglycerol kinase, DGK κ . *J. Biol. Chem.* 280: 39870-39881.
3. Nair, S., et al. 2006. Pharmacogenomics of phenolic antioxidant butylated hydroxyanisole (BHA) in the small intestine and liver of Nrf2 knockout and C57BL/6J mice. *Pharm. Res.* 23: 2621-2637.
4. Mérida, I., et al. 2008. Diacylglycerol kinases: at the hub of cell signalling. *Biochem. J.* 409: 1-18.
5. Hozumi, Y. 2009. Morphological study of the diacylglycerol kinase family. *Kaibogaku Zasshi* 84: 121-122.
6. Riese, M.J., et al. 2011. Decreased diacylglycerol metabolism enhances ERK activation and augments CD8⁺ T cell functional responses. *J. Biol. Chem.* 286: 5254-5265.
7. van der Zanden, L.F., et al. 2011. Common variants in DGKK are strongly associated with risk of hypospadias. *Nat. Genet.* 43: 48-50.

CHROMOSOMAL LOCATION

Genetic locus: DGKK (human) mapping to Xp11.22; Dgkk (mouse) mapping to X A1.1.

SOURCE

DGK- κ (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DGK- κ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-167627 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

DGK- κ (T-13) is recommended for detection of DGK- κ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other DGK family members.

DGK- κ (T-13) is also recommended for detection of DGK- κ in additional species, including equine, canine and bovine.

Suitable for use as control antibody for DGK- κ siRNA (h): sc-91229, DGK- κ siRNA (m): sc-155881, DGK- κ shRNA Plasmid (h): sc-91229-SH, DGK- κ shRNA Plasmid (m): sc-155881-SH, DGK- κ shRNA (h) Lentiviral Particles: sc-91229-V and DGK- κ shRNA (m) Lentiviral Particles: sc-155881-V.

Molecular Weight of DGK- κ : 142 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **DGK- κ (4G12): sc-517147**, our highly recommended monoclonal alternative to DGK- κ (T-13).