SANTA CRUZ BIOTECHNOLOGY, INC.

DGK-ι (H–166): sc-98730

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Diacylglycerol kinases (DGKs) phosphorylate diacylglycerol (DAG) to produce phosphatidic acid. DAG and phosphatidic acid are lipids that act as second messengers in signaling cascades. DGK-α influences cell activation and secretion of lethal exosomes, which in turn control cell death. DGK-β is abundant in restricted brain regions such as the caudate putamen and olfactory tubercle. DGK-γ encodes full-length and truncated transcripts that are present in a range of human tissues, with greatest expression observed in retina. DGK-δ is most abundant in skeletal muscle. DGK-ε shows specificity for arachidonyl-containing diacylglycerol and is expressed predominantly in testis. DGK-ζ is most abundant in brain and muscle. DGK-η is closely related to DGK-δ. DGK-θ is most abundant in the cerebellum and hippocampus. DGK-ι is present in brain and retina as a predominant transcript of more than 12 kb, including a long 3'-untranslated region, with additional low abundance transcripts of 9.5 and 7.5 kb. DGKs have structural motifs that play regulatory roles, and these motifs form the basis for dividing the DGKs into five subtypes.

REFERENCES

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6. Tang, W., et al. 1996. Molecular cloning of a novel human diacylglycerol kinase highly selective for arachidonate-containing substrates. J. Biol. Chem. 271: 10237-10241.
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8. Ding, L., et al. 1998. The cloning and characterization of a novel human diacylglycerol kinase, DGK-ι. J. Biol. Chem. 273: 32746-32752.
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CHROMOSOMAL LOCATION

Genetic locus: DGKI (human) mapping to 7q33; Dgki (mouse) mapping to 6 B1.

SOURCE

DGK-ι (H–166) is a rabbit polyclonal antibody raised against amino acids 854-1019 mapping near the C-terminus of DGK-ι of human origin.

PRODUCT

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

APPLICATIONS

DGK-ι (H–166) is recommended for detection of DGK-ι of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

DGK-ι (H–166) is also recommended for detection of DGK-ι in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for DGK-ι siRNA (h): sc-105292, DGK-ι siRNA (m): sc-143025, DGK-ι shRNA Plasmid (h): sc-105292-SH, DGK-ι shRNA Plasmid (m): sc-143025-SH, DGK-ι shRNA (h) Lentiviral Particles: sc-105292-V and DGK-ι shRNA (m) Lentiviral Particles: sc-143025-V.

Molecular Weight of DGK-ι: 130 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or mouse eye extract: sc-364241.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

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.