

## DGK- $\gamma$ (H-56): sc-98621

### 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- $\alpha$  influences cell activation and secretion of lethal exosomes, which in turn control cell death. DGK- $\beta$  is abundant in restricted brain regions such as the caudate putamen and olfactory tubercle. DGK- $\gamma$  encodes full-length and truncated transcripts that are present in a range of human tissues, with greatest expression observed in retina. DGK- $\delta$  is most abundant in skeletal muscle. DGK- $\epsilon$  shows specificity for arachidonyl-containing diacylglycerol and is expressed predominantly in testis. DGK- $\zeta$  is most abundant in brain and muscle. DGK- $\eta$  is closely related to DGK- $\delta$ . DGK- $\theta$  is most abundant in the cerebellum and hippocampus. DGK- $\iota$  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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### CHROMOSOMAL LOCATION

Genetic locus: DGKG (human) mapping to 3q27.2; Dgkg (mouse) mapping to 16 B1.

### SOURCE

DGK- $\gamma$  (H-56) is a rabbit polyclonal antibody raised against amino acids 317-367 mapping within an internal region of DGK- $\gamma$  of human origin.

### PRODUCT

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

### APPLICATIONS

DGK- $\gamma$  (H-56) is recommended for detection of DGK- $\gamma$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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- $\gamma$  (H-56) is also recommended for detection of DGK- $\gamma$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for DGK- $\gamma$  siRNA (h): sc-60527, DGK- $\gamma$  siRNA (m): sc-60528, DGK- $\gamma$  shRNA Plasmid (h): sc-60527-SH, DGK- $\gamma$  shRNA Plasmid (m): sc-60528-SH, DGK- $\gamma$  shRNA (h) Lentiviral Particles: sc-60527-V and DGK- $\gamma$  shRNA (m) Lentiviral Particles: sc-60528-V.

Molecular Weight of DGK- $\gamma$ : 90 kDa.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.