

GRK 4 (H-70): sc-13079

BACKGROUND

Heterotrimeric G protein-mediated signal transduction is a dynamically regulated process with the intensity of signal decreasing over time despite the continued presence of the agonist. This phenomenon, referred to as agonist-mediated desensitization, involves phosphorylation of the receptor by two classes of enzymes. The first are the second messenger-regulated kinases such as c-AMP dependent protein kinase A and protein kinase C. The second are the G protein-coupled receptor kinases (GRKs). At least seven members of the GRK family have been identified. These include rhodopsin kinase, GRK 1; two forms of β -adrenergic receptor kinase, GRK 2 (β ARK, β ARK1) and GRK 3 (β ARK2); IT-11 (GRK 4); GRK 5; GRK 6 and GRK 7. Phosphorylation of receptors by GRKs appears to be strictly dependent on the receptor being in its agonist-activated state.

CHROMOSOMAL LOCATION

Genetic locus: GRK4 (human) mapping to 4p16.3; Grk4 (mouse) mapping to 5 B2.

SOURCE

GRK 4 (H-70) is a rabbit polyclonal antibody raised against amino acids 81-150 mapping near the N-terminus of GRK 4 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.

APPLICATIONS

GRK 4 (H-70) is recommended for detection of GRK 4 α , β , γ and δ isoforms of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for GRK 4 siRNA (h): sc-35516, GRK 4 siRNA (m): sc-35517, GRK 4 shRNA Plasmid (h): sc-35516-SH, GRK 4 shRNA Plasmid (m): sc-35517-SH, GRK 4 shRNA (h) Lentiviral Particles: sc-35516-V and GRK 4 shRNA (m) Lentiviral Particles: sc-35517-V.

Molecular Weight of GRK 4: 60 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, RAW 264.7 whole cell lysate: sc-2211 or rat testis extract: sc-2400.

STORAGE

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

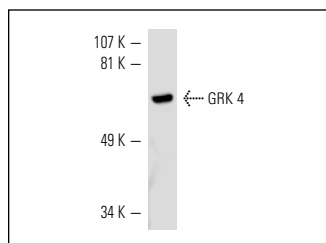
PROTOCOLS

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

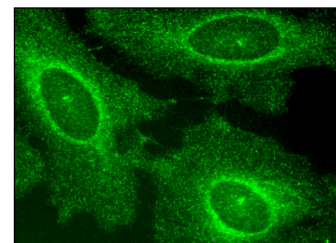
RESEARCH USE

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

DATA



GRK 4 (H-70): sc-13079. Western blot analysis of GRK 4 expression in rat testis tissue extract.



GRK 4 (H-70): sc-13079. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and perinuclear localization.

SELECT PRODUCT CITATIONS

1. Perroy, J., et al. 2003. Phosphorylation-independent desensitization of GABA_B receptor by GRK 4. *EMBO J.* 22: 3816-3824.
2. Rankin, M.L., et al. 2006. The D1 dopamine receptor is constitutively phosphorylated by G protein-coupled receptor kinase 4. *Mol. Pharmacol.* 69: 759-769.
3. Matsubayashi, J., et al. 2008. Expression of G protein-coupled receptor kinase 4 is associated with breast cancer tumorigenesis. *J. Pathol.* 216: 317-327.
4. Kever, L.B., et al. 2008. G protein-coupled receptor kinase 4 γ interacts with inactive G α_s and G α_{13} . *Biochem. Biophys. Res. Commun.* 367: 649-655.
5. Gildea, J.J., et al. 2009. Caveolin-1 and dopamine-mediated internalization of NaKATPase in human renal proximal tubule cells. *Hypertension* 54: 1070-1076.
6. Gildea, J.J., et al. 2010. HK-2 human renal proximal tubule cells as a model for G protein-coupled receptor kinase type 4-mediated dopamine 1 receptor uncoupling. *Hypertension* 56: 505-511.
7. Gildea, J.J., et al. 2013. A novel role for c-Myc in G protein-coupled receptor kinase 4 (GRK4) transcriptional regulation in human kidney proximal tubule cells. *Hypertension* 61: 1021-1027.

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