SANTA CRUZ BIOTECHNOLOGY, INC.

GRK 5 (H-64): sc-11396

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (βARK, βARK1) and GRK 3 (βARK2); 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: GRK5 (human) mapping to 10q26.11; Grk5 (mouse) mapping to 19 D3.

SOURCE

GRK 5 (H-64) is a rabbit polyclonal antibody raised against amino acids 94-157 mapping near the N-terminus of GRK 5 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.

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.

APPLICATIONS

GRK 5 (H-64) is recommended for detection of GRK 5 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).

GRK 5 (H-64) is also recommended for detection of GRK 5 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GRK 5 siRNA (h): sc-39042, GRK 5 siRNA (m): sc-39043, GRK 5 shRNA Plasmid (h): sc-39042-SH, GRK 5 shRNA Plasmid (m): sc-39043-SH, GRK 5 shRNA (h) Lentiviral Particles: sc-39042-V and GRK 5 shRNA (m) Lentiviral Particles: sc-39043-V.

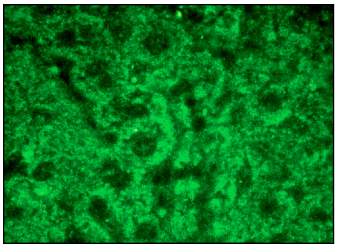
Molecular Weight of GRK 5: 65 kDa.

Positive Controls: rat brain extract: sc-2392 or mouse liver extract: sc-2256.

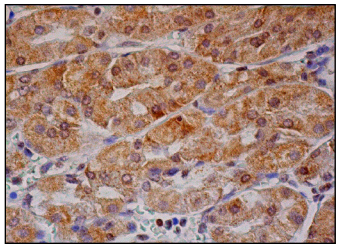
RECOMMENDED SECONDARY REAGENTS

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.

DATA



GRK 5 (H-64): sc-11396. Immunofluorescence staining of normal mouse liver frozen section showing cytoplasmic staining.



GRK 5 (H-64): sc-11396. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Usui, I., et al. 2004. GRK2 is an endogenous protein inhibitor of the Insulin signaling pathway for glucose transport stimulation. EMBO J. 23: 2821-2829.
2. Arawaka, S., et al. 2006. The role of G protein-coupled receptor kinase 5 in pathogenesis of sporadic Parkinson's disease. J. Neurosci. 26: 9227-9238.
3. Aguado-Llera, D., et al. 2007. Alteration of the somatostatinergic system in the striatum of rats with acute experimental autoimmune encephalomyelitis. Neuroscience 148: 238-249.
4. Gong, K., et al. 2008. A novel protein kinase A-independent, β-arrestin-1-dependent signaling pathway for p38 mitogen-activated protein kinase activation by β2-adrenergic receptors. J. Biol. Chem. 283: 29028-29036.
5. Aguado-Llera, D., et al. 2010. Role of ethanolamine phosphate in the hippocampus of rats with acute experimental autoimmune encephalomyelitis. Neurochem. Int. 58: 22-34.

RESEARCH USE

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