

GRK 4 (K-20): sc-1016

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 (K-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within the α , β specific insertional sequence 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.

GRK 4 (K-20) is available conjugated to agarose (sc-1016 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-1016 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

GRK 4 (K-20) is recommended for detection of GRK 4 α and β 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.

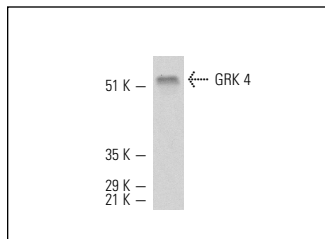
Molecular Weight of GRK 4: 60 kDa.

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

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 4 (K-20): sc-1016. Western blot analysis of GRK 4 expression in BJAB whole cell lysate.

SELECT PRODUCT CITATIONS

1. Sallese, M., et al. 2000. The G protein-coupled receptor kinase GRK 4 mediates homologous desensitization of metabotropic glutamate receptor 1. *FASEB J.* 14: 2569-2580.
2. Matsubayashi, J., et al. 2008. Expression of G protein-coupled receptor kinase 4 is associated with breast cancer tumorigenesis. *J. Pathol.* 216: 317-327.

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 **GRK 4 (D-11): sc-376891** or **GRK 4 (A-5): sc-9985**, our highly recommended monoclonal alternatives to GRK 4 (K-20).