SANTA CRUZ BIOTECHNOLOGY, INC.

GRK 6 (XX-4): sc-100380

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 class is comprised of the second messenger-regulated kinases, such as cAMP dependent protein kinase A and protein kinase C. The second class includes 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.

REFERENCES

1. Hausdorff, W.P., et al. 1990. Turning off the signal: desensitization of β-adrenergic receptor function. FASEB J. 4: 2881-2889.
2. Lorenz, W., et al. 1991. The receptor kinase family: primary structure of rhodopsin kinase reveals similarities to the β-adrenergic receptor kinase. Proc. Natl. Acad. Sci. USA 88: 8715-8719.
3. Benovic, J.L., et al. 1991. Cloning, expression, and chromosomal localization of β-adrenergic receptor kinase 2. J. Biol. Chem. 266: 14939-14946.

CHROMOSOMAL LOCATION

Genetic locus: GRK6 (human) mapping to 5q35.3; Grk6 (mouse) mapping to 13 B1.

SOURCE

GRK 6 (XX-4) is a mouse monoclonal antibody raised against recombinant GRK 6 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

GRK 6 (XX-4) is recommended for detection of GRK 6 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GRK 6 siRNA (h): sc-35518, GRK 6 siRNA (m): sc-35519, GRK 6 shRNA Plasmid (h): sc-35518-SH, GRK 6 shRNA Plasmid (m): sc-35519-SH, GRK 6 shRNA (h) Lentiviral Particles: sc-35518-V and GRK 6 shRNA (m) Lentiviral Particles: sc-35519-V.

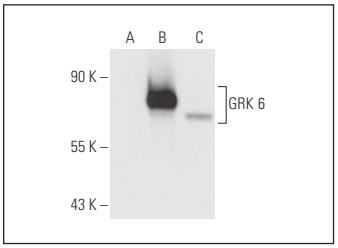
Molecular Weight of GRK 6: 66 kDa.

Positive Controls: Ramos cell lysate: sc-2216, BJAB whole cell lysate: sc-2207 or GRK 6 (h): 293T Lysate: sc-158578.

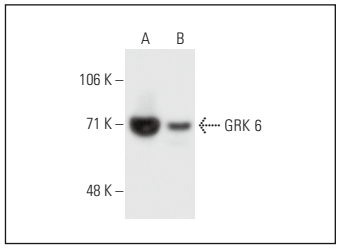
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



GRK 6 (XX-4): sc-100380. Western blot analysis of GRK 6 expression in non-transfected 293T: sc-117752 (**A**), human GRK 6 transfected 293T: sc-158578 (**B**) and BJAB (**C**) whole cell lysates.



GRK 6 (XX-4): sc-100380. Western blot analysis of GRK 6 expression in BJAB (**A**) and Ramos (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Ahmed, M.R., et al. 2010. Lentiviral overexpression of GRK6 alleviates L-dopa-induced dyskinesia in experimental Parkinson's disease. Sci. Transl. Med. 2: 28ra28.
2. Wang, F.L., et al. 2012. Renoprotective effects of berberine and its possible molecular mechanisms in combination of high-fat diet and low-dose streptozotocin-induced diabetic rats. Mol. Biol. Rep. 40: 2405-2418.
3. Panneerselvam, J., et al. 2015. IL-24 inhibits lung cancer cell migration and invasion by disrupting the SDF-1/CXCR4 signaling axis. PLoS ONE 10: e0122439.
4. Olson, T.L., et al. 2021. Protein expression and purification of G protein-coupled receptor kinase 6 (GRK6), toward structure-based drug design and discovery for multiple myeloma. Protein Expr. Purif. 185: 105890.

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 for detailed protocols and support products.