

# GRK 1 (G-8): sc-8004

## 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 c-AMP 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 $\alpha$  and  $\beta$ ); two forms of  $\beta$ -adrenergic receptor kinase: GRK 2 ( $\beta$ ARK,  $\beta$ ARK1) and GRK 3 ( $\beta$ 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.

## REFERENCES

- Hausdorff, W.P., et al. 1990. Turning off the signal: desensitization of  $\beta$ -adrenergic receptor function. *FASEB J.* 4: 2881-2889.
- Lorenz, W., et al. 1991. The receptor kinase family: primary structure of rhodopsin kinase reveals similarities to the  $\beta$ -adrenergic receptor kinase. *Proc. Natl. Acad. Sci. USA* 88: 8715-8719.

## CHROMOSOMAL LOCATION

Genetic locus: GRK1 (human) mapping to 13q34; Grk1 (mouse) mapping to 8 A1.1.

## SOURCE

GRK 1 (G-8) is a mouse monoclonal antibody raised against full-length GRK 1 of human origin with epitope mapping at the C-terminus.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRK 1 (G-8) is available conjugated to agarose (sc-8004 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP.

## APPLICATIONS

GRK 1 (G-8) is recommended for detection of GRK 1 of mouse, rat, human, bovine and avian 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).

Suitable for use as control antibody for GRK 1 siRNA (h): sc-29336, GRK 1 siRNA (m): sc-35512, GRK 1 shRNA Plasmid (h): sc-29336-SH, GRK 1 shRNA Plasmid (m): sc-35512-SH, GRK 1 shRNA (h) Lentiviral Particles: sc-29336-V and GRK 1 shRNA (m) Lentiviral Particles: sc-35512-V.

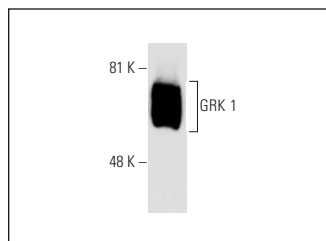
Molecular Weight of GRK 1: 70 kDa.

Positive Controls: Y79 cell lysate: sc-2240.

## STORAGE

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

## DATA



GRK 1 (G-8): sc-8004. Western blot analysis of GRK 1 expression in bovine retina rod outer segment suspension.

## SELECT PRODUCT CITATIONS

- Hölzel, M., et al. 2001. Myc/Max/Mad regulate the frequency but not the duration of productive cell cycles. *EMBO Rep.* 2: 1125-1132.
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- Ying, G., et al. 2018. The small GTPase RAB28 is required for phagocytosis of cone outer segments by the murine retinal pigmented epithelium. *J. Biol. Chem.* 293: 17546-17558.
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- Kinyamu, H.K., et al. 2020. Proteasome inhibition creates a chromatin landscape favorable to RNA Pol II processivity. *J. Biol. Chem.* 295: 1271-1287.
- Sharif, A.S., et al. 2021. Deletion of the phosphatase INPP5E in the murine retina impairs photoreceptor axoneme formation and prevents disc morphogenesis. *J. Biol. Chem.* E-published.

## RESEARCH USE

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