

# GRK 3 (C-14): sc-563

## 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  $\beta$ -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.

## CHROMOSOMAL LOCATION

Genetic locus: ADRBK2 (human) mapping to 22q12.1; Adrbk2 (mouse) mapping to 5 F.

## SOURCE

GRK 3 (C-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of GRK 3 of bovine origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-563 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GRK 3 (C-14) is recommended for detection of GRK 3 of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (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 3 (C-14) is also recommended for detection of GRK 3 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GRK 3 siRNA (h): sc-35514, GRK 3 siRNA (m): sc-35515, GRK 3 shRNA Plasmid (h): sc-35514-SH, GRK 3 shRNA Plasmid (m): sc-35515-SH, GRK 3 shRNA (h) Lentiviral Particles: sc-35514-V and GRK 3 shRNA (m) Lentiviral Particles: sc-35515-V.

Molecular Weight of GRK 3: 83 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, Ramos cell lysate: sc-2216 or HL-60 whole cell lysate: sc-2209.

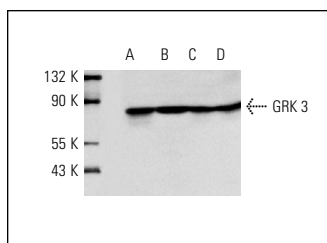
## STORAGE

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

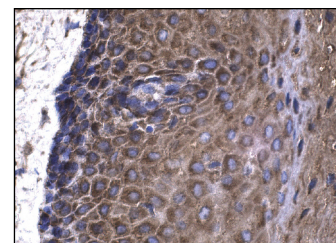
## RESEARCH USE

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

## DATA



GRK 3 (C-14): sc-563. Western blot analysis of GRK 3 expression in BJAB (A), Ramos (B), HL-60 (C) and MOLT-4 (D) whole cell lysates.



GRK 3 (C-14): sc-563. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervix tissue showing cytoplasmic staining of squamous epithelial cells.

## SELECT PRODUCT CITATIONS

- Aragay, A.M., et al. 1998. Monocyte chemoattractant protein-1-induced CCR2B receptor desensitization mediated by the G protein-coupled receptor kinase 2. *Proc. Natl. Acad. Sci. USA* 95: 2985-2990.
- Bychkov, E., et al. 2010. Sex differences in the activity of signalling pathways and expression of G protein-coupled receptor kinases in the neonatal ventral hippocampal lesion model of schizophrenia. *Int. J. Neuropsychopharmacol.* 14: 1-15.
- Zhao, W., et al. 2011. Chicken type II collagen induced immune tolerance of mesenteric lymph node lymphocytes by enhancing  $\beta_2$ -adrenergic receptor desensitization in rats with collagen-induced arthritis. *Int. Immunopharmacol.* 11: 12-18.
- Sedaghat, K. and Tiberi, M. 2011. Cytoplasmic tail of D1 dopaminergic receptor differentially regulates desensitization and phosphorylation by G protein-coupled receptor kinase 2 and 3. *Cell. Signal.* 23: 180-192.
- Soltysinska, E., et al. 2011. Chronic sympathetic activation promotes downregulation of  $\beta$ -adrenoceptor-mediated effects in the guinea pig heart independently of structural remodeling and systolic dysfunction. *Pflugers Arch.* 462: 529-543.
- Ghosh, M. and Schonbrunn, A. 2011. Differential temporal and spatial regulation of somatostatin receptor phosphorylation and dephosphorylation. *J. Biol. Chem.* 286: 13561-13573.
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Try **GRK 3 (C-11): sc-365197**, our highly recommended monoclonal alternative to GRK 3 (C-14).