

GRK 3 (C-11): sc-365197

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: GRK3 (human) mapping to 22q12.1; Adrbk2 (mouse) mapping to 5 F.

SOURCE

GRK 3 (C-11) is a mouse monoclonal antibody raised against amino acids 646-688 mapping at the C-terminus of GRK 3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRK 3 (C-11) is available conjugated to agarose (sc-365197 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365197 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365197 PE), fluorescein (sc-365197 FITC), Alexa Fluor[®] 488 (sc-365197 AF488), Alexa Fluor[®] 546 (sc-365197 AF546), Alexa Fluor[®] 594 (sc-365197 AF594) or Alexa Fluor[®] 647 (sc-365197 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365197 AF680) or Alexa Fluor[®] 790 (sc-365197 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GRK 3 (C-11) is recommended for detection of GRK 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 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.

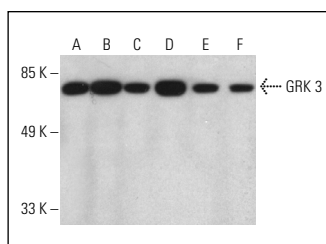
Molecular Weight of GRK 3: 83 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, HeLa whole cell lysate: sc-2200 or HL-60 whole cell lysate: sc-2209.

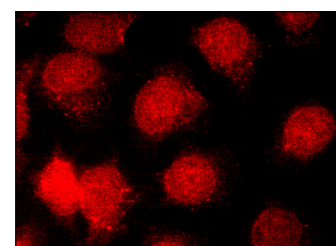
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



GRK 3 (C-11) HRP: sc-365197 HRP. Direct western blot analysis of GRK 3 expression in Jurkat (A), HL-60 (B), MOLT-4 (C), HeLa (D), K-562 (E) and BJAB (F) whole cell lysates.



GRK 3 (C-11): sc-365197. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Wang, F.L., et al. 2013. 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.
2. Ferrie, A.M., et al. 2014. Divergent label-free cell phenotypic pharmacology of ligands at the overexpressed β_2 -adrenergic receptors. *Sci. Rep.* 4: 3828.
3. Reichel, M., et al. 2022. Suitability of GRK antibodies for individual detection and quantification of GRK isoforms in Western Blots. *Int. J. Mol. Sci.* 23: 1195.

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.