

# GRK 6 (D-10): sc-377494

## 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  $\beta$ -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.
- Benovic, J.L., et al. 1991. Cloning, expression, and chromosomal localization of  $\beta$ -adrenergic receptor kinase 2. *J. Biol. Chem.* 266: 14939-14946.
- Inglese, J., et al. 1993. Structure and mechanism of the G protein-coupled receptor kinases. *J. Biol. Chem.* 268: 23735-23738.
- Liggett, S.B., et al. 1993. Structural basis for receptor subtype-specific regulation revealed by a chimeric  $\beta_3/\beta_2$ -adrenergic receptor. *Proc. Natl. Acad. Sci. USA* 90: 3665-3669.

## CHROMOSOMAL LOCATION

Genetic locus: GRK6 (human) mapping to 5q35.3.

## SOURCE

GRK 6 (D-10) is a mouse monoclonal antibody raised against amino acids 96-165 mapping near the N-terminus of GRK 6 of human origin.

## 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 6 (D-10) is available conjugated to agarose (sc-377494 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377494 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377494 PE), fluorescein (sc-377494 FITC), Alexa Fluor<sup>®</sup> 488 (sc-377494 AF488), Alexa Fluor<sup>®</sup> 546 (sc-377494 AF546), Alexa Fluor<sup>®</sup> 594 (sc-377494 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-377494 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-377494 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-377494 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

GRK 6 (D-10) is recommended for detection of GRK 6 of human origin by Western Blotting (starting dilution 1:100, 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 6 siRNA (h): sc-35518, GRK 6 shRNA Plasmid (h): sc-35518-SH and GRK 6 shRNA (h) Lentiviral Particles: sc-35518-V.

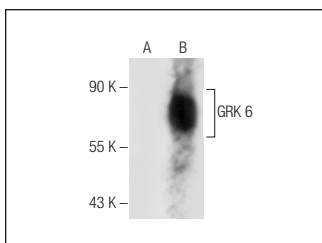
Molecular Weight of GRK 6: 66 kDa.

Positive Controls: GRK 6 (h): 293T Lysate: sc-158578, Jurkat whole cell lysate: sc-2204 or Ramos cell lysate: sc-2216.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



GRK 6 (D-10): sc-377494. Western blot analysis of GRK 6 expression in non-transfected: sc-117752 (A) and human GRK 6 transfected: sc-158578 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- 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.

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