

GRK 3 (E-15): sc-9306

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.

REFERENCES

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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.
4. Inglese, J., et al. 1993. Structure and mechanism of the G protein-coupled receptor kinases. *J. Biol. Chem.* 268: 23735-23738.
5. Liggett, S.B., et al. 1993. Structural basis for receptor subtype-specific regulation revealed by a chimeric β 3/ β 2-adrenergic receptor. *Proc. Natl. Acad. Sci. USA* 90: 3665-3669.
6. Pei, G., et al. 1994. An approach to the study of G protein-coupled receptor kinases: an *in vitro*-purified membrane assay reveals differential receptor specificity and regulation by $G_{\beta\gamma}$ subunits. *Proc. Natl. Acad. Sci. USA* 91: 3633-3636.

CHROMOSOMAL LOCATION

Genetic locus: ADRBK2 (human) mapping to 22q11.23.

SOURCE

GRK 3 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GRK 3 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-9306 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

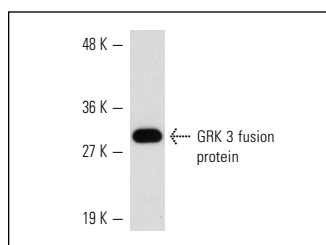
GRK 3 (E-15) is recommended for detection of GRK 3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μ g per 100–500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and 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 shRNA Plasmid (h): sc-35514-SH and GRK 3 shRNA (h) Lentiviral Particles: sc-35514-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.

DATA



GRK 3 (E-15): sc-9306. Western blot analysis of human recombinant GRK 3 fusion protein.

SELECT PRODUCT CITATIONS

1. Niculescu, A.B., et al. 2000. Identifying a series of candidate genes for mania and psychosis: a convergent functional genomics approach. *Physiol. Genomics* 4: 83-91.
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3. Dautzenberg, F.M., et al. 2002. GRK 3 regulation during CRF- and urocortin-induced CRF-1 receptor desensitization. *Biochem. Biophys. Res. Commun.* 298: 303-308.
4. Menco, B.P. 2005. The fine-structural distribution of G-protein receptor kinase 3, β -Arrestin-2, Ca^{2+} /calmodulin-dependent protein kinase II and phosphodiesterase PDE1C2, and a Cl⁻ cotransporter in rodent olfactory epithelia. *J. Neurocytol.* 34: 11-36.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **GRK 3 (C-11): sc-365197**, our highly recommended monoclonal alternative to GRK 3 (E-15).