

GRK 2 (h4): 293T Lysate: sc-172730

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), 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

1. Hausdorff, W.P., et al. 1990. Turning off the signal: desensitization of β -adrenergic receptor function. *FASEB J.* 4: 2881-2889.
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. Premont, R.T., et al. 1994. Identification, purification, and characterization of GRK5, a member of the family of G protein-coupled receptor kinases. *J. Biol. Chem.* 269: 6832-6841.
7. 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.
8. Inglese, J., et al. 1994. Functionally active targeting domain of the β -adrenergic receptor kinase: an inhibitor of G $\beta\gamma$ -mediated stimulation of type II adenylyl cyclase. *Proc. Natl. Acad. Sci. USA* 91: 3637-3641.

CHROMOSOMAL LOCATION

Genetic locus: ADRBK1 (human) mapping to 11q13.1.

PRODUCT

GRK 2 (h4): 293T Lysate represents a lysate of human GRK 2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

GRK 2 (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive GRK 2 antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

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.