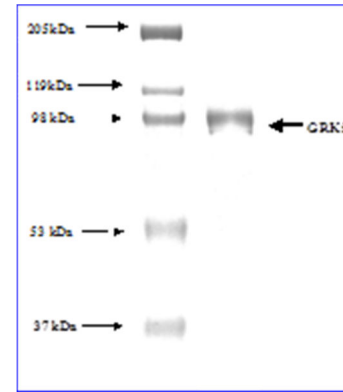


Active GRK5

CATALOG #:	7709-5
SOURCE:	Sf 9 cells
PURITY:	1.25 µg of GRK5 protein was subjected to SDS-PAGE and Coomassie blue staining. The scan of the gel showed >95% purity of the GRK5 product, and the band was at ~95 kDa.
SPECIFIC ACTIVITY:	28 nmol/min/mg
MOLECULAR WEIGHT:	~95 kDa. (NT GST tag)
FORMULATION:	Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 25% glycerol).
STORAGE CONDITIONS:	Store product frozen at or below -70°C. Stable for 1 year at -70°C as undiluted stock. Aliquot to avoid repeated thawing and freezing.

BACKGROUND DESCRIPTION: G protein-coupled receptor kinases (GRKs) play an important role in phosphorylating and regulating the activity of a variety of G protein-coupled receptors. Haribabu and Snyderman identified GRK5 and GRK6. GRK5 is a member of the guanine nucleotide-binding protein (G protein)-coupled receptor kinase subfamily of the Ser/Thr protein kinase family. It phosphorylates the activated forms of G protein-coupled receptors thus initiating their deactivation. It has also been shown to play a role in regulating the motility of polymorphonuclear leukocytes (PMNs). Bullrich used a rodent-human hybrid panel to map 2 newly identified members of the GRK family: GPRK5 and GPRK6 to 10q24-qter and 5q35, respectively. Desensitization of G protein-coupled receptors regulates the number of polymorphonuclear leukocytes (PMNs), as well as their motility and ability to stop upon contact with pathogens or target cells, and this desensitization is mediated by GRKs. MIP2 induces GRK2 and GRK5 expression in PMNs through PI3KG signaling. However, lipopolysaccharide (LPS), acting through TLR4 signaling, mediated through MEK1 /MEK2, transcriptionally downregulates expression of GRK2 and GRK5 in response to MIP2, which decreases chemokine receptor desensitization and markedly augments PMN migration. Thus, LPS-activated TLR4 signaling regulates PMN migration by modulating the expression of chemokine receptors in a GRK2- and GRK5-dependent manner. Recombinant full-length human GRK5 was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag.

ACTIVITY: 28 nmol phosphate incorporated into Casein per minute per mg protein at 30°C for 15 minutes using a final concentration of 50 µM ATP (0.83 µCi/assay).



GRK5 Protein Gel

RELATED PRODUCTS:

- C3aR Antibody (Cat. No. 5543-100)

FOR RESEARCH USE ONLY! Not to be used in humans.