

GRK5 recombinant protein

Recombinant GRK5 protein

CATALOG #
AAA60252

HOST
Baculovirus

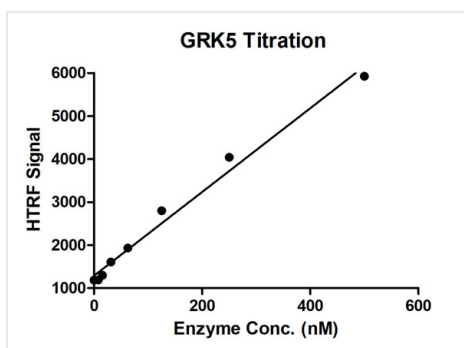
PRODUCT SYNONYMS

GRK5; Recombinant GRK5 protein; G-protein Receptor Kinase 5; GRK5 recombinant protein

PRODUCT SPECIFICATIONS

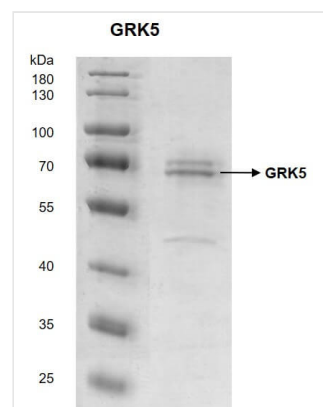
Host	Baculovirus
Form/Format	Recombinant GRK5 protein is supplied in 25mM HEPES-NaOH pH7.5, 300mM NaCl, 10% glycerol, 0.04% Triton X-100, 0.5mM TCEP.
Protein Species	Human
Tag	DYKDDDDK-Tag
Protein Details	Recombinant GRK5 protein was expressed in baculovirus expression system as the full length protein (accession number NP_005299.1) with a N-terminal DYKDDDDK tag.
Notes	This product was manufactured as described in Protein Details. Where possible, We has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for a given product is shown on the lot-specific Technical Data Sheet.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Recombinant proteins in solution are temperature sensitive and must be stored at -80 degree C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. Shipping Temp: Dry Ice

IMAGES



Application Data

HTRF assay for GRK5 activity 1 uM STK S3 substrate was incubated with different concentrations of GRK5 protein in a 10 ul reaction system containing 1xEnzymatic Buffer, 5 mM MgCl₂, 2 mg/ml Casein, 1 mM DTT and 100 uM ATP for 1 hour. Then 10 ul detection reagents containing STK antibody (1:2) and SA-XL665 (1:100) diluted with 1x Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection



SDS-PAGE

Recombinant GRK5 protein 10% SDS-PAGE with Coomassie staining MW: 68.8 kDa Purity: >50%

ADDITIONAL INFORMATION

Related Product Information for GRK5 recombinant protein	Background: GRK5 is a serine/threonine kinase that phosphorylates preferentially the activated forms of a variety of G-protein-coupled receptors (GPCRs). Such receptor phosphorylation initiates beta-arrestin-mediated receptor desensitization, internalization, and signaling events leading to their down-regulation. GRK5 phosphorylates a variety of GPCRs, including adrenergic receptors, muscarinic acetylcholine receptors (more specifically Gi-coupled M2/M4 subtypes), dopamine receptors and opioid receptors. In addition to GPCRs, it also phosphorylates various substrates: Hsc70-interacting protein/ST13, TP53/p53, HDAC5, and arrestin-1/ARRB1. Phosphorylation of ARRB1 by GRK5 inhibits G-protein independent MAPK1/MAPK3 signaling downstream of 5HT4-receptors. Phosphorylation of HDAC5, a repressor of myocyte enhancer factor 2 (MEF2) leading to nuclear export of HDAC5 and allowing MEF2-mediated transcription. Phosphorylation of TP53/p53, a crucial tumor suppressor, inhibits TP53/p53-mediated apoptosis. Phosphorylation of ST13 regulates internalization of the chemokine receptor. Diseases associated with GRK5 include Systolic Heart Failure and Palmoplantar Keratoderma and Congenital Alopecia 2.
Product Categories/Family for GRK5 recombinant protein	Recombinant Proteins; Kinase

NCBI AND UNIPROT INFORMATION

NCBI GI #	4885349
NCBI GeneID	2869
NCBI Accession #	NP_005299.1
NCBI GenBank Nucleotide #	NM_005308.2
UniProt Accession #	P34947; Q5T059; D3DRD0
Molecular Weight	67,787 Da
NCBI Official Full Name	G protein-coupled receptor kinase 5
NCBI Official Synonym Full Names	G protein-coupled receptor kinase 5
NCBI Official Symbol	GRK5
NCBI Official Synonym Symbols	GPRK5
NCBI Protein Information	G protein-coupled receptor kinase 5; FP2025; g protein-coupled receptor kinase GRK5
UniProt Protein Name	G protein-coupled receptor kinase 5
UniProt Gene Name	GRK5
UniProt Synonym Gene Names	GPRK5
UniProt Entry Name	GRK5_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.