

Recombinant Mouse Grk5 Protein, MYC/DDK-tagged

Cat. No. Grk5-1051M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Purified recombinant protein of full-length mouse G protein-coupled receptor kinase 5 (Grk5), with C-terminal MYC/DDK tag, was expressed in HEK293T cells.
Species	Mouse
Source	HEK293
Description	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. 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, 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. Phosphorylates rhodopsin (RHO) (in vitro) and a non G-protein-coupled receptor, LRP6 during Wnt signaling (in vitro).
Molecular Mass	67.7 kDa

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Purity	>80% as determined by SDS-PAGE and Coomassie blue staining
Stability	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
Storage	Store at -80 centigrade after receiving vials.
Concentration	>50 µg/mL as determined by microplate BCA method
Storage Buffer	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

GENE INFORMATION

Gene Name	Grk5 G protein-coupled receptor kinase 5 [Mus musculus (house mouse)]
Official Symbol	Grk5
Synonyms	Grk5; G protein-coupled receptor kinase 5; Gprk5; G protein-coupled receptor kinase 5; g protein-coupled receptor kinase GRK5; EC 2.7.11.16
Gene ID	14773
mRNA Refseq	NM_018869
Protein Refseq	NP_061357
UniProt ID	Q8VEB1

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