

GRK5 Antibody (N-Terminus)
Rabbit Polyclonal Antibody
Catalog # ALS10655**Specification**

GRK5 Antibody (N-Terminus) - Product Information

Application	IHC
Primary Accession	P34947
Reactivity	Human, Bovine, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68kDa KDa

GRK5 Antibody (N-Terminus) - Additional Information**Gene ID** 2869**Other Names**

G protein-coupled receptor kinase 5, 2.7.11.16, G protein-coupled receptor kinase GRK5, GRK5, GPRK5

Target/Specificity

Human GRK5. BLAST analysis of the peptide immunogen showed no homology with other human proteins.

Reconstitution & Storage

Long term: -70°C; Short term: +4°C

Precautions

GRK5 Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

GRK5 Antibody (N-Terminus) - Protein Information**Name** GRK5**Synonyms** GPRK5**Function**

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).

Cellular Location

Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. Note=Predominantly localized at the plasma membrane; targeted to the cell surface through the interaction with phospholipids. Nucleus localization is regulated in a GPCR and Ca(2+)/calmodulin-dependent fashion

Tissue Location

Highest levels in heart, placenta, lung > skeletal muscle > brain, liver, pancreas > kidney.

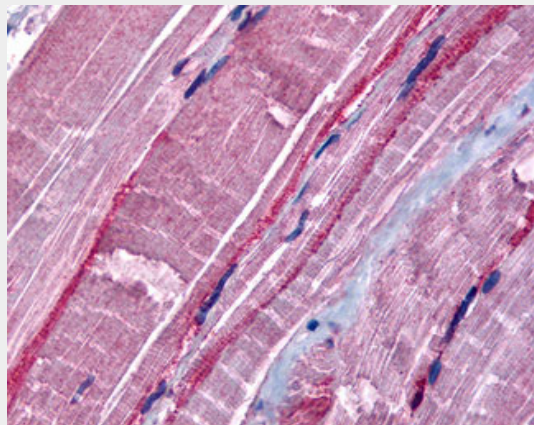
Volume

50 µl

GRK5 Antibody (N-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

GRK5 Antibody (N-Terminus) - Images

Anti-GRK5 antibody ALS10655 IHC of human skeletal muscle.

GRK5 Antibody (N-Terminus) - Background

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GRK5 Antibody (N-Terminus) - References

Kunapuli P.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:5588-5592(1993).
Deloukas P.,et al.Nature 429:375-381(2004).
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.
Ungerer M.,et al.Circulation 87:454-463(1993).
Kunapuli P.,et al.J. Biol. Chem. 269:10209-10212(1994).