

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

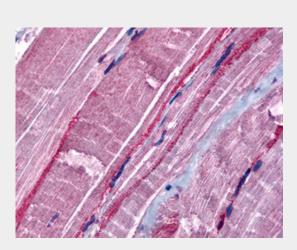
50 µl

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
- <u>Immunoprecipitation</u>
- Flow Cytomety
- 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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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).

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).