

**GRK5 Antibody (Internal)**  
**Rabbit Polyclonal Antibody**  
**Catalog # ALS10619****Specification**

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**GRK5 Antibody (Internal) - Product Information**

Application	IHC
Primary Accession	<a href="#">P34947</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	68kDa KDa

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

**GRK5 Antibody (Internal) - 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**

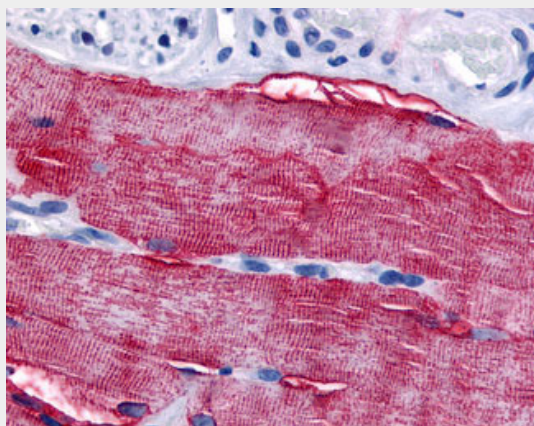
50 µl

### **GRK5 Antibody (Internal) - 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 (Internal) - Images**



Anti-GRK5 antibody ALS10619 IHC of human skeletal muscle.

### **GRK5 Antibody (Internal) - 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 (Internal) - 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).