

**Anti-GRK5 Picoband Antibody**  
**Catalog # ABO12394****Specification**

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**Anti-GRK5 Picoband Antibody - Product Information**

Application	WB, IHC-P
Primary Accession	<a href="#">P34947</a>
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for G protein-coupled receptor kinase 5 (GRK5) detection. Tested with WB, IHC-P in Human; Rat; Mouse.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-GRK5 Picoband Antibody - 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

**Calculated MW**

67787 MW KDa

**Application Details**

Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human, Mouse, Rat, By Heat  
Western blot, 0.1-0.5 µg/ml, Human, Rat

**Subcellular Localization**

Cytoplasm. Nucleus. Cell membrane; Peripheral membrane protein. 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 Specificity**

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

**Protein Name**

G protein-coupled receptor kinase 5

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the C-terminus of human GRK5 (393-429aa

KREEVDRRVLETEEVYSHKFSEEAKSICKMLLTAK), different from the related mouse and rat sequences by three amino acids.

**Purification**

Immunogen affinity purified.

**Cross Reactivity**

No cross reactivity with other proteins

**Storage**

**At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.**

**Anti-GRK5 Picoband Antibody - 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.

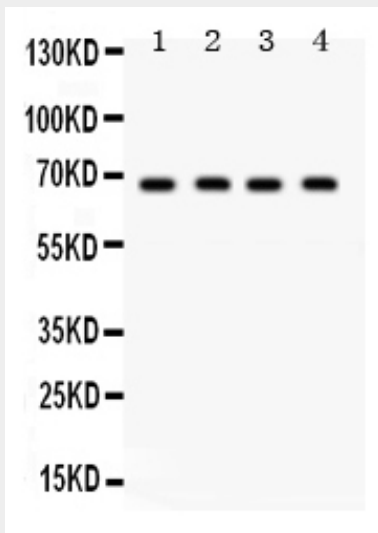
**Anti-GRK5 Picoband Antibody - Protocols**

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

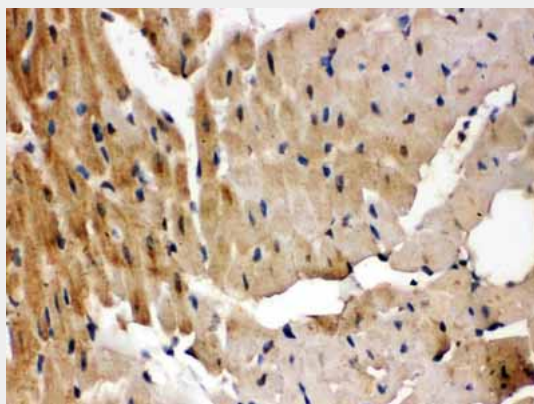
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

- [Flow Cytometry](#)
- [Cell Culture](#)

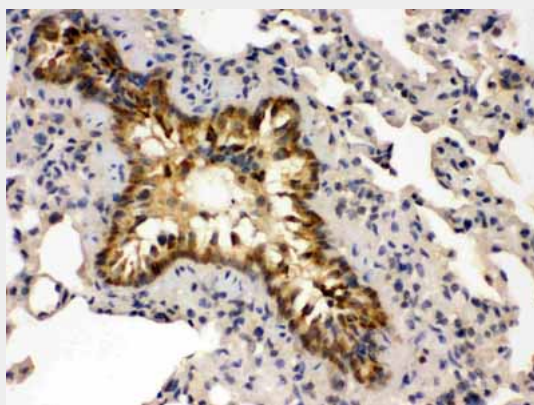
### Anti-GRK5 Picoband Antibody - Images



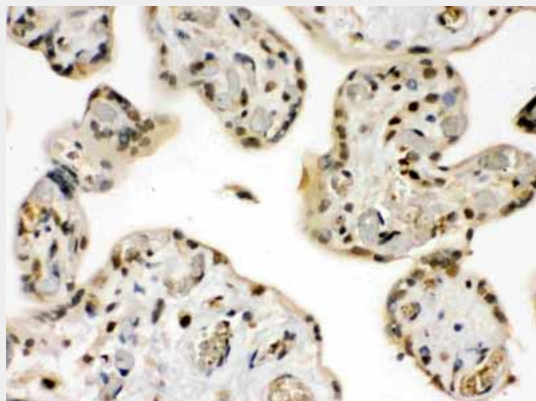
Anti- GRK5 Picoband antibody, ABO12394, Western blottingAll lanes: Anti GRK5 (ABO12394) at 0.5ug/mlLane 1: Rat Lung Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: HEPG2 Whole Cell Lysate at 40ugLane 4: SMMC Whole Cell Lysate at 40ugPredicted bind size: 68KDObserved bind size: 68KD



Anti- GRK5 Picoband antibody, ABO12394,IHC(P)IHC(P): Rat Cardiac Muscle Tissue



Anti- GRK5 Picoband antibody, ABO12394,IHC(P)IHC(P): Mouse Lung Tissue



Anti- GRK5 Picoband antibody, ABO12394,IHC(P)IHC(P): Human Placenta Tissue

#### **Anti-GRK5 Picoband Antibody - Background**

G protein-coupled receptor kinase 5 is an enzyme that in humans is encoded by the GRK5 gene. It is mapped to 10q26.11. This gene encodes a member of the guanine nucleotide-binding protein (G protein)-coupled receptor kinase subfamily of the Ser/Thr protein kinase family. The protein phosphorylates the activated forms of G protein-coupled receptors thus initiating their deactivation. It has also been shown to play a role in regulating the motility of polymorphonuclear leukocytes (PMNs).