

Anti-GRK5 Picoband Antibody
Catalog # ABO12394

Specification

Anti-GRK5 Picoband Antibody - Product Information

Application	WB, IHC
Primary Accession	P34947
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 Ca²⁺/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 Na₂HPO₄, 0.05mg Na₃.

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 r°Constitution, 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.

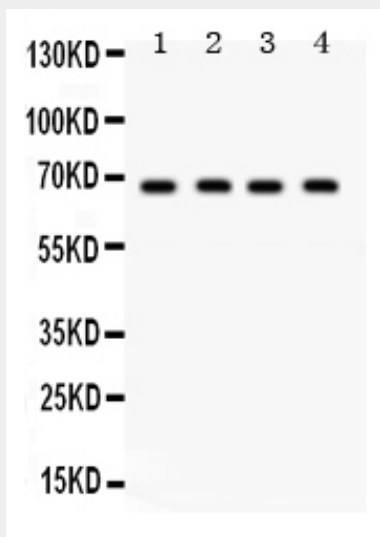
Anti-GRK5 Picoband Antibody - Protocols

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

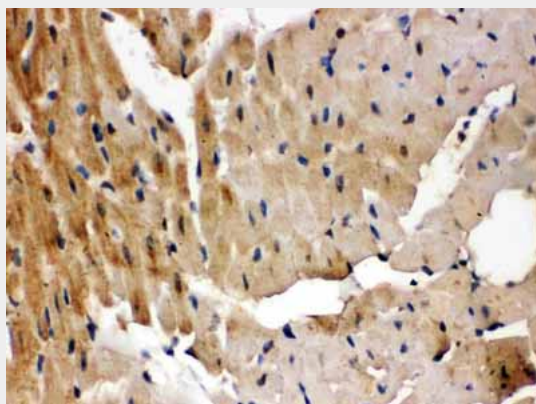
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)

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

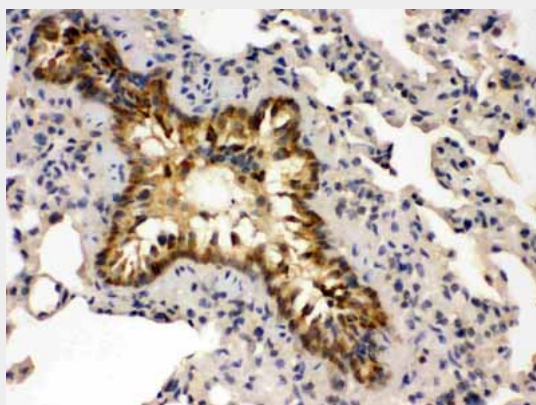
Anti-GRK5 Picoband Antibody - Images



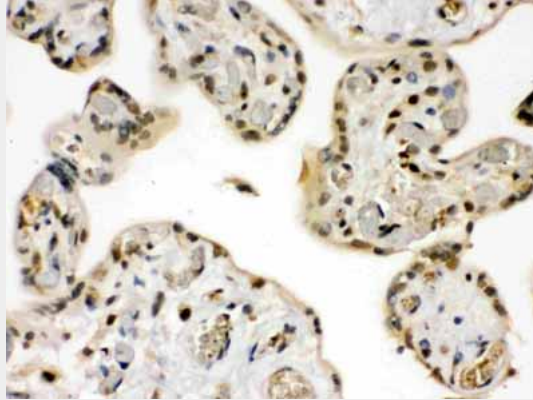
Anti- GRK5 Picoband antibody, ABO12394, Western blottingAll lanes: Anti GRK5 (ABO12394) at 0.5ug/mlLane 1: Rat Lung Tissue Lysate at 50ugLane 2: HELA Whole Cell Lysate at 40ugLane 3: HEPG2 Whole Cell Lysate at 40ugLane 4: SMMC Whole Cell Lysate at 40ugPredicted bind size: 68KDObserved bind size: 68KD



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).