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GRK4 Antibody (C-term) Blocking Peptide
Synthetic peptide
Catalog # BP7006a

Specification

GRK4 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P32298

GRK4 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2868

Other Names
G protein-coupled receptor kinase 4, G protein-coupled receptor kinase GRK4, ITI1, GRK4, GPRK2L, GPRK4

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7006a was selected from the C-term region of human GRK4 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

GRK4 Antibody (C-term) Blocking Peptide - Protein Information

Name GRK4

Synonyms GPRK2L, GPRK4

Function
Specifically phosphorylates the activated forms of G protein- coupled receptors. GRK4-alpha can phosphorylate rhodopsin and its activity is inhibited by calmodulin; the other three isoforms do not phosphorylate rhodopsin and do not interact with calmodulin. GRK4-alpha and GRK4-gamma phosphorylate DRD3. Phosphorylates ADRB2.

Cellular Location
Cytoplasm. Cytoplasm, cell cortex. Note=Both at the cell surface and dispersed in the cytoplasm under basal conditions Receptor stimulation results in the internalization of GRK4 to the perinuclear area, where colocalization with DRD3 is observed strongly at 5 and 15 minutes. DRD3

and GRK4 colocalize in lipid rafts of renal proximal tubule cells

Tissue Location
Isoform 1, isoform 2, isoform 3, and isoform 4 are expressed in testis. Isoform 4 is expressed in myometrium

GRK4 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

GRK4 Antibody (C-term) Blocking Peptide - Images

GRK4 Antibody (C-term) Blocking Peptide - Background

Protein kinases are enzymes that transfer a phosphate group from a phosphate donor, generally the g phosphate of ATP, onto an acceptor amino acid in a substrate protein. By this basic mechanism, protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation. With more than 500 gene products, the protein kinase family is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. The AGC kinase group consists of 63 kinases including the cyclic nucleotide-regulated protein kinase (PKA & PKG) family, the diacylglycerol-activated/phospholipid-dependent protein kinase C (PKC) family, the related to PKA and PKC (RAC/Akt) protein kinase family, the kinases that phosphorylate G protein-coupled receptors family (ARK), and the kinases that phosphorylate ribosomal protein S6 family (RSK).

GRK4 Antibody (C-term) Blocking Peptide - References

Perroy, J., et al., EMBO J. 22(15):3816-3824 (2003).Watanabe, H., et al., Kidney Int. 62(3):790-798 (2002).Sallese, M., et al., J. Biol. Chem. 272(15):10188-10195 (1997).Premont, R.T., et al., J. Biol. Chem. 271(11):6403-6410 (1996).Sallese, M., et al., Biochem. Biophys. Res. Commun. 199(2):848-854 (1994).