

**ADRBK1 Antibody (C-term) Blocking peptide**  
Synthetic peptide  
Catalog # BP7004a**Specification**

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**ADRBK1 Antibody (C-term) Blocking peptide - Product Information**Primary Accession [P25098](#)**ADRBK1 Antibody (C-term) Blocking peptide - Additional Information**

Gene ID 156

**Other Names**

Beta-adrenergic receptor kinase 1, Beta-ARK-1, G-protein coupled receptor kinase 2, ADRBK1, BARK, BARK1, GRK2

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP7004a](/product/products/AP7004a) was selected from the C-term region of human GRK2 . 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.

**ADRBK1 Antibody (C-term) Blocking peptide - Protein Information**Name GRK2 ([HGNC:289](#))

Synonyms ADRBK1, BARK, BARK1

**Function**

Specifically phosphorylates the agonist-occupied form of the beta-adrenergic and closely related receptors, probably inducing a desensitization of them (PubMed: [19715378](http://www.uniprot.org/citations/19715378)). Key regulator of LPAR1 signaling (PubMed: [19306925](http://www.uniprot.org/citations/19306925)). Competes with RALA for binding to LPAR1 thus affecting the signaling properties of the receptor (PubMed: [19306925](http://www.uniprot.org/citations/19306925)). Desensitizes LPAR1 and LPAR2 in a phosphorylation-independent manner (PubMed: [19306925](http://www.uniprot.org/citations/19306925)). Positively regulates ciliary smoothened (SMO)-dependent

Hedgehog (Hh) signaling pathway by facilitating the trafficking of SMO into the cilium and the stimulation of SMO activity (By similarity). Inhibits relaxation of airway smooth muscle in response to blue light (PubMed:<a href="http://www.uniprot.org/citations/30284927" target="\_blank">30284927</a>).

#### Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:P26817}. Cell membrane {ECO:0000250|UniProtKB:P21146}. Postsynapse {ECO:0000250|UniProtKB:P26817}. Presynapse {ECO:0000250|UniProtKB:P26817}

#### Tissue Location

Expressed in peripheral blood leukocytes.

### ADRBK1 Antibody (C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

### ADRBK1 Antibody (C-term) Blocking peptide - Images

### ADRBK1 Antibody (C-term) Blocking peptide - Background

Beta-adrenergic receptor kinase (ADRBK1), also known as GRK2, phosphorylates the beta-2-adrenergic receptor and appears to mediate agonist-specific desensitization observed at high agonist concentrations. ADRBK1 is an ubiquitous cytosolic enzyme that specifically phosphorylates the activated form of the beta-adrenergic and related G-protein-coupled receptors. Heart failure is accompanied by severely impaired beta-adrenergic receptor (beta-AR) function. An important mechanism for the rapid desensitization of beta-AR function is agonist-stimulated receptor phosphorylation by the beta-AR kinase (beta-ARK1), an enzyme known to be elevated in failing human heart tissue. Abnormal coupling of beta-adrenergic receptor to G protein is involved in the pathogenesis of the failing heart.

### ADRBK1 Antibody (C-term) Blocking peptide - References

Li, J., et al., J. Biol. Chem. 278(32):30219-30226 (2003).Wan, K.F., et al., J. Biol. Chem. 278(20):18658-18663 (2003).Yang, X.L., et al., World J. Gastroenterol. 9(4):800-803 (2003).Hagen, S.A., et al., Anesthesiology 98(2):343-348 (2003).Eichmann, T., et al., J. Biol. Chem. 278(10):8052-8057 (2003).