

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

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). Key regulator of LPAR1 signaling (PubMed:19306925). Competes with RALA for binding to LPAR1 thus affecting the signaling properties of the receptor (PubMed:19306925). Desensitizes LPAR1 and LPAR2 in a phosphorylation- independent manner (PubMed: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:30284927).

Cellular Location

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

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](#)