

ADRBK1 Antibody (C-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7004a

Specification

ADRBK1 Antibody (C-term) - Product Information

Application	IHC-P, WB,E
Primary Accession	P25098
Other Accession	P26817 , Q99MK8 , P21146
Reactivity	Human
Predicted	Bovine, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	633-660

ADRBK1 Antibody (C-term) - 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

This ADRBK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 633-660 amino acids from the C-terminal region of human ADRBK1.

Dilution

IHC-P~~1:50~100

WB~~1:1000

E~~Use at an assay dependent concentration.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

ADRBK1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

ADRBK1 Antibody (C-term) - 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](#)). Phosphorylates catecholamine-activated ADRB2 to regulate physiological cardiomyocyte contraction rate responses (By similarity). Also phosphorylates ligand- bound C3a and C5a anaphylatoxin receptors (C3AR1 and C5AR1, respectively), leading to receptor desensitization (PubMed:[21799898](#), PubMed:[23077507](#)). 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:P26817}. Cell membrane {ECO:0000250|UniProtKB:P21146}. Postsynapse {ECO:0000250|UniProtKB:P26817}. Presynapse {ECO:0000250|UniProtKB:P26817}

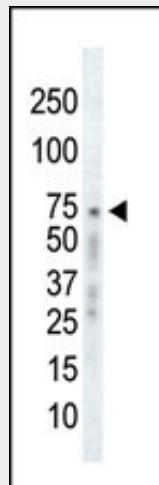
Tissue Location

Expressed in peripheral blood leukocytes.

ADRBK1 Antibody (C-term) - Protocols

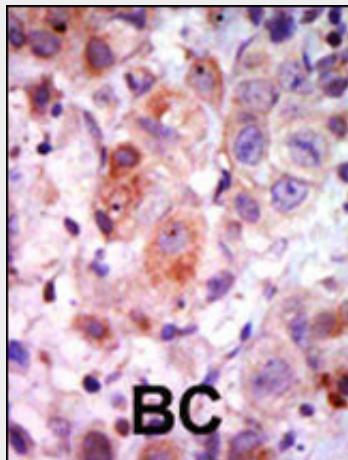
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

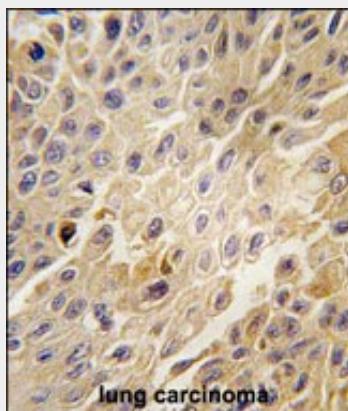
ADRBK1 Antibody (C-term) - Images

Western blot analysis of anti-GRK2 C-term Pab (Cat. #AP7004a) in Ramos cell lysate. GRK2

(arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Formalin-fixed and paraffin-embedded human lung carcinoma tissue reacted with GRK2 Antibody (C-term) (Cat.#AP7004a), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ADRBK1 Antibody (C-term) - 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) - 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).

ADRBK1 Antibody (C-term) - Citations

- [Decreased GRK3 but not GRK2 expression in frontal cortex from bipolar disorder patients.](#)