

GRK2 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1550a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P25098
Reactivity	Human, Mouse, Rat, Monkey
Host	Mouse
Clonality	Monoclonal
Clone Names	3F8
Isotype	IgG1
Calculated MW	79574
Description	The product of this gene phosphorylates the beta-2-adrenergic receptor and appears to mediate agonist-specific desensitization observed at high agonist concentrations. This protein is an ubiquitous cytosolic enzyme that specifically phosphorylates the activated form of the beta-adrenergic and related G-protein-coupled receptors. Abnormal coupling of beta-adrenergic receptor to G protein is involved in the pathogenesis of the failing heart. (provided by RefSeq)Tissue specificity: Expressed in peripheral blood leukocytes
Immunogen	Purified recombinant fragment of human GRK2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	156
Other Names	Beta-adrenergic receptor kinase 1, Beta-ARK-1, 2.7.11.15, G-protein coupled receptor kinase 2, ADRBK1, BARK, BARK1, GRK2
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GRK2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GRK2 (HGNC:289)
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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.

References

1. Mol Biol Cell. 2008 Jul;19(7):2973-83.
2. Biochemistry. 2009 May 26;48(20):4285-93.

Images

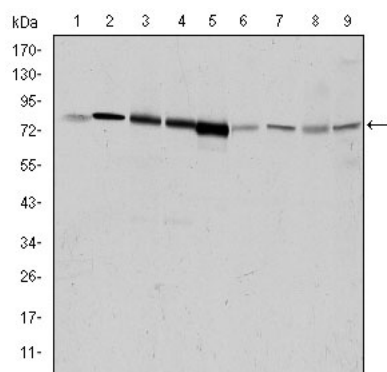


Figure 1: Western blot analysis using GRK2 mouse mAb against Hela (1), Jurkat (2), MOLT4 (3), RAJI (4), THP-1 (5), L1210 (6), Cos7 (7), PC-12 (8), and NIH/3T3 (9) cell lysate.

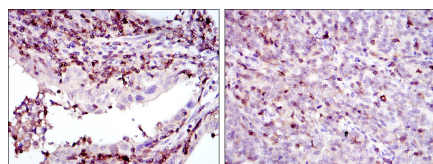
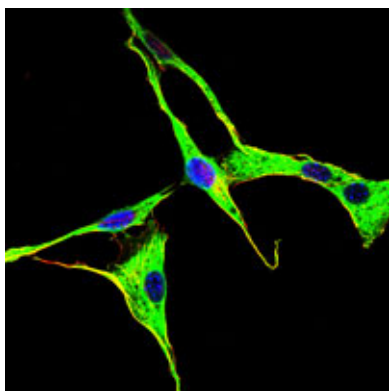


Figure 2: Immunohistochemical analysis of paraffin-embedded endometrial cancer tissues (left) and cervical cancer tissues (right) using GRK2 mouse mAb with DAB staining.

Figure 3: Immunofluorescence analysis of NIH/3T3 cells using GRK2 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.