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ADRA1A Rabbit pAb

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Catalog # AP52193

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P35348
Reactivity	Rat, Human, Mouse
Predicted	Pig, Dog, Rabbit, Chicken, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	51487
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Alpha-1A adrenergic receptor
Epitope Specificity	201-300/466
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Note=Location at the nuclear membrane facilitates heterooligomerization and regulates ERK-mediated signaling in cardiac myocytes. Colocalizes with GNAQ, PLCB1 as well as LAP2 at the nuclear membrane of cardiac myocytes.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Alpha-1-adrenergic receptors (alpha-1-ARs) are members of the G protein-coupled receptor superfamily. They activate mitogenic responses and regulate growth and proliferation of many cells. There are 3 alpha-1-AR subtypes: alpha-1A, -1B and -1D, all of which signal through the Gq/11 family of G-proteins and different subtypes show different patterns of activation. This gene encodes alpha-1A-adrenergic receptor. Alternative splicing of this gene generates four transcript variants, which encode four different isoforms with distinct C-termini but having similar ligand binding properties. [provided by RefSeq, Jul 2008].

Additional Information

Gene ID	148
Other Names	Alpha-1A adrenergic receptor, Alpha-1A adrenoreceptor, Alpha-1A adrenoceptor, Alpha-1C adrenergic receptor, Alpha-adrenergic receptor 1c, ADRA1A (HGNC:277), ADRA1C
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ADRA1A (HGNC:277)
Synonyms	ADRA1C
Function	Alpha-1 adrenergic receptors are G protein-coupled receptors for catecholamines that signal through the G(q) family of G proteins, including G(q) and G(11). Upon activation, they stimulate the phosphatidylinositol-calcium second messenger pathway, leading to calcium release from intracellular stores and activation of protein kinase C (PubMed:37563160). ADRA1A binds the catecholamine ligands norepinephrine and epinephrine (PubMed:18802028, PubMed:37563160, PubMed:7815325, PubMed:8024574, PubMed:8183249, PubMed:8832064). Can also couple to G(14) protein (By similarity). Nuclear ADRA1A forms heterooligomers with ADRA1B to regulate phenylephrine(PE)-stimulated ERK signaling in cardiac myocytes (PubMed:18802028, PubMed:22120526). At the plasma membrane, ADRA1A interacts with CAVIN4/MURC to regulates ERK activation in cardiomyocytes, contributing to the regulation of cardiac hypertrophy (PubMed:24567387). Additionally, functions as a vasopressor in resistance arteries and plays a role in maintaining normal arterial blood pressure (By similarity).
Cellular Location	Nucleus membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cytoplasm. Membrane, caveola. Note=Location at the nuclear membrane facilitates heterooligomerization and regulates ERK-mediated signaling in cardiac myocytes (PubMed:18802028, PubMed:22120526) Colocalizes with GNAQ, PLCB1 as well as LAP2 at the nuclear membrane of cardiac myocytes (PubMed:18802028, PubMed:22120526). Colocalizes with CAVIN4 and CAV3 at the plasma membrane and partly within the cytoplasm in cardiomyocytes (PubMed:24567387).
Tissue Location	Expressed in heart, brain, liver and prostate, but not in kidney, lung, adrenal, aorta and pituitary. Within the prostate, expressed in the apex, base, periurethral and lateral lobe. Isoform 4 is the most abundant isoform expressed in the prostate with high levels also detected in liver and heart.

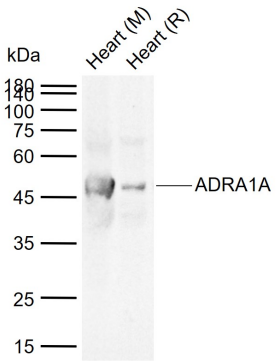
Background

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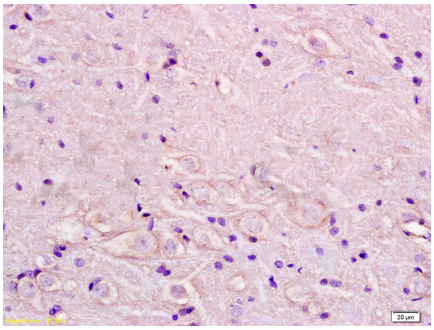
References

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Weinberg D.H.,et al.Biochem. Biophys. Res. Commun. 201:1296-1304(1994).
Forray C.,et al.Mol. Pharmacol. 45:703-708(1994).
Tseng-Crank J.,et al.Br. J. Pharmacol. 115:1475-1485(1995).
Hirasawa A.,et al.FEBS Lett. 363:256-260(1995).

Images



Sample:
Lane 1: Mouse Heart tissue lysates
Lane 2: Rat Heart tissue lysates
Primary: Anti-ADRA1A (AP52193) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 51 kDa
Observed band size: 47 kDa



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-ADRA1/ADRA1B/alpha 1 Adrenergic Receptor Polyclonal Antibody, Unconjugated (AP52193) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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