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alpha 1a Adrenergic Receptor Rabbit mAb

Catalog # AP75059

Product Information

Application	WB, IHC-P, FC
Primary Accession	P35348
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	51487

Additional Information

Gene ID	148
Other Names	ADRA1A
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A FC~~1:100-1:1000
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

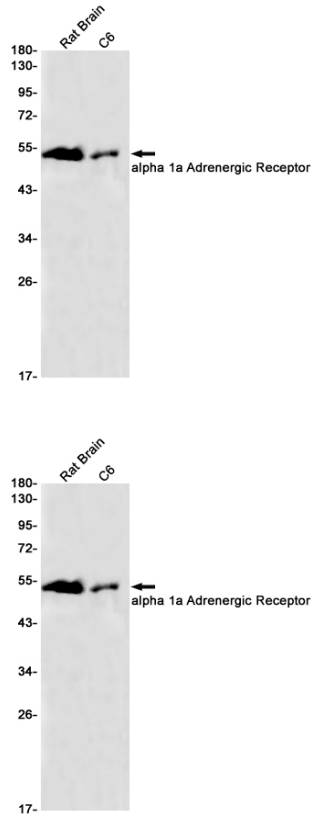
Name	ADRA1A (HGNC:277)
Synonyms	ADRA1C
Function	Alpha-1 adrenergic receptors are G protein-coupled receptors for catecholamines that signal through the G(q) family of G proteins, including G(q) and G(11). Upon activation, they stimulate the phosphatidylinositol-calcium second messenger pathway, leading 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.

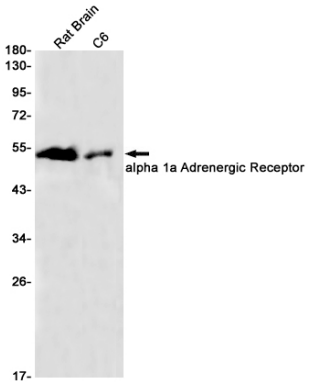
Background

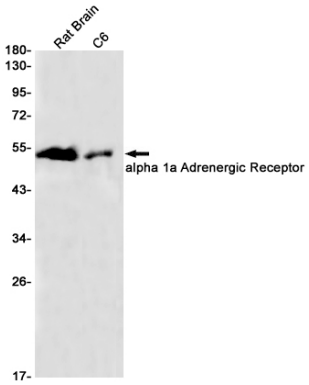
This alpha-adrenergic receptor mediates its action by association with G proteins that activate a phosphatidylinositol-calcium second messenger system. Its effect is mediated by G(q) and G(11) proteins. Nuclear ADRA1A-ADRA1B heterooligomers regulate phenylephrine(PE)-stimulated ERK signaling in cardiac myocytes.

Images



Western blot analysis of alpha 1a Adrenergic Receptor in rat Brain, C6 lysates using alpha 1a Adrenergic Receptor antibody.





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