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APLNR Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP14123c

Specification

APLNR Antibody (Center) Blocking peptide - Product Information

Primary Accession P35414

APLNR Antibody (Center) Blocking peptide - Additional Information

Gene ID 187

Other Names
Apelin receptor, Angiotensin receptor-like 1, G-protein coupled receptor APJ, G-protein coupled receptor HG11, APLNR, AGTRL1, APJ

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP14123c was selected from the Center region of APLNR. 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.

APLNR Antibody (Center) Blocking peptide - Protein Information

Name APLNR (HGNC:339)

Synonyms AGTRL1, APJ

Function
G protein-coupled receptor for peptide hormones apelin (APLN) and apelin receptor early endogenous ligand (APELA/ELA), that plays a role in the regulation of normal cardiovascular function and fluid homeostasis (PubMed:11090199, PubMed:22810587, PubMed:25639753, PubMed:28137936, PubMed:35817871, PubMed:38428423). When acting as apelin receptor, activates both G(i) protein pathway that inhibits adenylate cyclase activity, and the beta-arrestin pathway that promotes

internalization of the receptor (PubMed:11090199, PubMed:25639753, PubMed:28137936, PubMed:35817871, PubMed:38428423). APLNR/APJ also functions as mechanoreceptor that is activated by pathological stimuli in a G-protein-independent fashion to induce beta-arrestin signaling, hence eliciting cardiac hypertrophy (PubMed:22810587, PubMed:38428423). However, the presence of apelin ligand blunts cardiac hypertrophic induction from APLNR/APJ on response to pathological stimuli (PubMed:22810587, PubMed:38428423). Plays a key role in early development such as gastrulation, blood vessels formation and heart morphogenesis by acting as a APELA receptor (By similarity). May promote angioblast migration toward the embryonic midline, i.e. the position of the future vessel formation, during vasculogenesis (By similarity). Promotes sinus venosus (SV)-derived endothelial cells migration into the developing heart to promote coronary blood vessel development (By similarity). Also plays a role in various processes in adults such as regulation of blood vessel formation, blood pressure, heart contractility and heart failure (PubMed:25639753, PubMed:28137936).

Cellular Location
Cell membrane. Note=After exposure to apelin (APLN), internalized from the cell surface into an endosomal recycling compartment, from where it is recycled to the cell membrane (By similarity). After exposure to apelin receptor early endogenous ligand (APELA), internalized from the cell surface into an endosomal recycling compartment, from where it is recycled to the cell membrane (PubMed:25639753). {ECO:0000250|UniProtKB:Q9JHG3, ECO:0000269|PubMed:25639753}

Tissue Location
Expressed in heart, brain, kidney, stomach, spleen, thymus, lung, ovary, small intestine and colon, adipose tissues and pancreas (PubMed:25639753, PubMed:8294032). Expressed in glial cells, astrocytes and neuronal subpopulations (PubMed:8294032). Expressed in embryonic (ESCs) and induced (iPSCs) pluripotent stem cells (PubMed:25639753).

APLNR Antibody (Center) Blocking peptide - Protocols

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

- Blocking Peptides

APLNR Antibody (Center) Blocking peptide - Images

APLNR Antibody (Center) Blocking peptide - Background

This gene encodes a member of the G protein-coupledreceptor gene family. The encoded protein is related to theangiotensin receptor, but is actually an apelin receptor thatinhibits adenylate cyclase activity and plays a counter-regulatoryrole against the pressure action of angiotensin II by exertinghypertensive effect. It functions in the cardiovascular and centralnervous systems, in glucose metabolism, in embryonic and tumorangiogenesis and as a human immunodeficiency virus (HIV-1)coreceptor. Two transcript variants resulting from alternativesplicing have been identified.

APLNR Antibody (Center) Blocking peptide - References

Tao, Y., et al. Invest. Ophthalmol. Vis. Sci. 51(8):4237-4242(2010)Zhao, Q., et al. Am. J. Hypertens.

23(6):606-613(2010)Lee, D.K., et al. Biochem. Biophys. Res. Commun. 395(2):185-189(2010)Falcao-Pires, I., et al. Expert Opin. Ther. Targets 14(3):231-241(2010)Peltonen, T., et al. J. Heart Valve Dis. 18(6):644-652(2009)