

APLNR Antibody (Center)
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14123c

Specification

APLNR Antibody (Center) - Product Information

Application	WB,E
Primary Accession	P35414
Other Accession	O9JHG3 , O9WV08 , NP_005152.1
Reactivity	Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	42660
Antigen Region	215-244

APLNR Antibody (Center) - 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

This APLNR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 215-244 amino acids from the Central region of human APLNR.

Dilution

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 purified through a protein A column, followed by peptide affinity purification.

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

APLNR Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

APLNR Antibody (Center) - 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

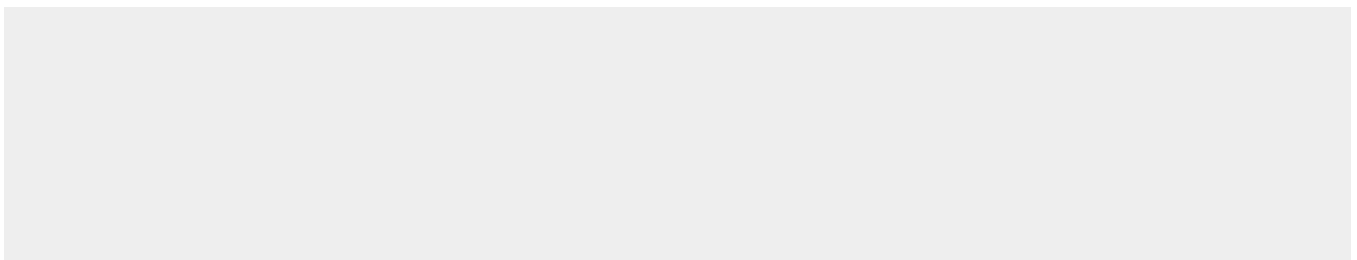
Expressed in heart, brain, kidney, stomach, spleen, thymus, lung, ovary, small intestine and colon, adipose tissues and pancreas (PubMed:[25639753](#), PubMed:[8294032](#)). Expressed in glial cells, astrocytes and neuronal subpopulations (PubMed:[8294032](#)). Expressed in embryonic (ESCs) and induced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

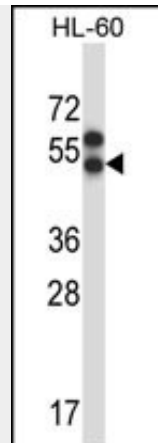
APLNR Antibody (Center) - Protocols

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](#)

APLNR Antibody (Center) - Images





APLNR Antibody (Center) (Cat. #AP14123c) western blot analysis in HL-60 cell line lysates (35ug/lane). This demonstrates the APLNR antibody detected the APLNR protein (arrow).

APLNR Antibody (Center) - Background

This gene encodes a member of the G protein-coupled receptor gene family. The encoded protein is related to the angiotensin receptor, but is actually an apelin receptor that inhibits adenylate cyclase activity and plays a counter-regulatory role against the pressure action of angiotensin II by exerting hypertensive effect. It functions in the cardiovascular and central nervous systems, in glucose metabolism, in embryonic and tumor angiogenesis and as a human immunodeficiency virus (HIV-1) coreceptor. Two transcript variants resulting from alternative splicing have been identified.

APLNR Antibody (Center) - 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)