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Rabbit Anti-APJ Receptor Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52194

Product Information

Application	WB, E
Primary Accession	P35414
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	42660
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Apelin receptor
Epitope Specificity	41-140/380
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	Cell membrane.
SIMILARITY	Belongs to the G-protein coupled receptor 1 family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. [provided by RefSeq

Additional Information

Gene ID	187
Other Names	APJ; APJR; HG11; AGTRL1; Apelin receptor; Angiotensin receptor-like 1; G-protein coupled receptor APJ; G-protein coupled receptor HG11; APLNR
Target/Specificity	Widely expressed in the brain, in glial cells, astrocytes and neuronal subpopulations, as well as in the spleen, thymus, ovary, small intestine and colon.
Dilution	WB=1:500-2000,Flow-Cyt=1 g/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce

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	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).

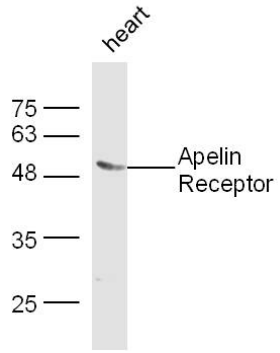
Background

Receptor for apelin coupled to G proteins that inhibit adenylate cyclase activity and plays a role in various processes in adults such as regulation of blood pressure, heart contractility, and heart failure. During heart formation, acts as a receptor for elabela hormone (ELA). Alternative coreceptor with CD4 for HIV-1 infection; may be involved in the development of AIDS dementia.

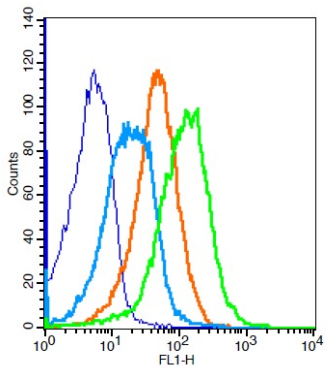
References

O'Dowd B.F.,et al.Gene 136:355-360(1993).
Eggerickx D.,et al.Submitted (JUN-1995) to the EMBL/GenBank/DDBJ databases.

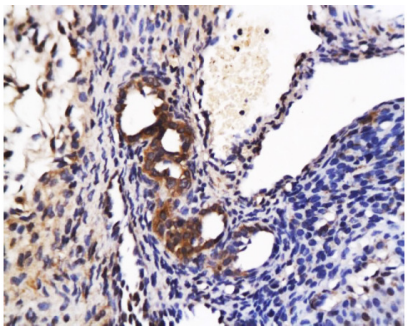
Images



Mouse heart lysates probed with Rabbit Anti-APJ Receptor Polyclonal Antibody, Unconjugated (AP52194) at 1:300 overnight at 4˚C. Followed by conjugation to secondary antibody at 1:500 for 90 min at 37˚C.



Mouse splenocytes probed with Rabbit Anti-APJ Receptor Polyclonal Antibody, Unconjugated (AP52194) at 1:100 for 30 minutes followed by incubation with a FITC conjugated secondary (green) for 30 minutes compared to control cells (blue), secondary only (light blue) and isotype control (orange).



Formalin-fixed and paraffin-embedded : rat ovary tissue labeled with Rabbit Anti-APELIN RECEPTOR Polyclonal Antibody, Unconjugated(AP52194) 1:200 followed by conjugation to the secondary antibody and DAB staining