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Anti-APLNR Reference Antibody (Regeneron patent anti-APLNR)

Catalog # APR11544

Product Information

Application	Functional assay, Kinetics (SPR), Kinetics (BLI), FACS, E, FTA
Primary Accession	P35414
Reactivity	Human
Clonality	Monoclonal
Isotype	IgG4SP
Calculated MW	42660

Additional Information

Target/Specificity	APLNR
Expression system	CHO

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).

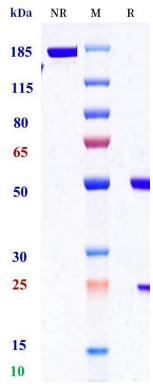
Cellular Location

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}

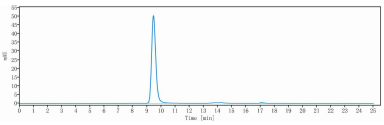
Tissue Location

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).

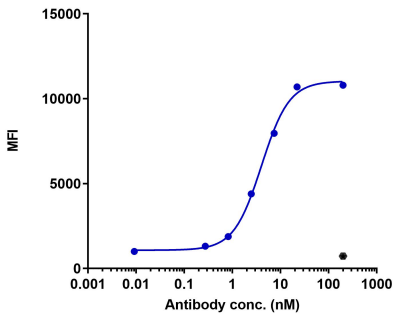
Images



Anti-APLNR Reference Antibody (Regeneron patent anti-APLNR) on SDS-PAGE under reducing (R) condition. The purity of the protein is greater than 95%.



The purity of Anti-APLNR Reference Antibody (Regeneron patent anti-APLNR) is 99.14%, determined by SEC-HPLC.



PLVX-puro-APLNR-FL cell line were stained with Regeneron patent anti-APLNR and negative control protein respectively, washed and then followed by PE and analyzed with FACS, with the EC50 is 4.042 nM.

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