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(DANRE) aplnra Antibody (C-Term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21299b

Product Information

Application	WB, E
Primary Accession	Q7SZP9
Reactivity	Zebrafish
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB52055
Calculated MW	40649

Additional Information

Gene ID	561935
Other Names	Apelin receptor A, Angiotensin II receptor-like 1a, Angiotensin receptor-like 1a, G-protein coupled receptor APJ A, aplnra, agtrl1 {ECO:0000312|EMBL:ABI994701}, agtrl1a
Target/Specificity	This DANRE aplnra antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 343-377 amino acids from the human region of DANRE aplnra.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. 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	(DANRE) aplnra Antibody (C-Term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	aplnra
Synonyms	agtrl1 {ECO:0000312|EMBL:ABI99470.1}, ag
Function	G protein-coupled receptor for peptide hormones apelin (apln) and apelin receptor early endogenous ligand (apela), that plays a role in the regulation of

	normal cardiovascular function and fluid homeostasis. 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:17336906, PubMed:24316148, PubMed:24407481). 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. However, the presence of apelin ligand blunts cardiac hypertrophic induction from APLNR/APJ on response to pathological stimuli (By similarity). Plays a key role in early development such as gastrulation, blood vessels formation and heart morphogenesis by acting as a receptor for apela hormone, promoting endoderm and mesendoderm cell migration and regulating the migration of cells fated to become myocardial progenitors, respectively (PubMed:17336906, PubMed:24316148, PubMed:24407481, PubMed:26017639). Positively regulates angioblast migration toward the embryonic midline, i.e. the position of the future vessel formation, during vasculogenesis (PubMed:26017639). May promote sinus venosus (SV)-derived endothelial cells migration into the developing heart to promote coronary blood vessel development (By similarity). Required for cardiovascular development, particularly for intersomitic vein angiogenesis by acting as a receptor for apln hormone (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 (By similarity). Acts redundantly with agtrl1b in heart development (PubMed:17336906).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:P79960}; Multi-pass membrane protein {ECO:0000250|UniProtKB:P79960} Note=Internalized to the cytoplasm after exposure to apelin (apln) 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 {ECO:0000250|UniProtKB:P35414, ECO:0000250|UniProtKB:P79960}
Tissue Location	First expressed before epiboly in dorsal precursors. During epiboly, expressed in the enveloping layer, yolk syncytial layer and migrating mesendoderm. During segmentation stages, expressed in epithelial structures such as adaxial cells, border cells of the newly formed somites, developing lens, otic vesicles and venous vasculature.

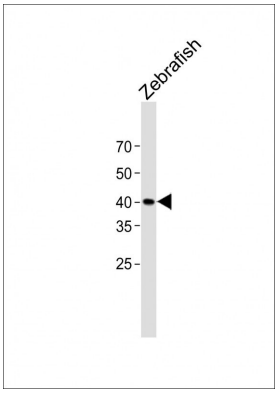
Background

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. Also plays a key role in early development such as gastrulation and heart morphogenesis by acting as a receptor for apela hormone, promoting endoderm and mesendoderm cell migration and regulating the migration of cells fated to become myocardial progenitors, respectively (PubMed:24316148, PubMed:24407481). Acts redundantly with agtrl1b in heart development.

References

Tucker B.,et al.Gene Expr. Patterns 7:258-265(2007).
Scott I.C.,et al.Dev. Cell 12:403-413(2007).
Chng S.C.,et al.Dev. Cell 27:672-680(2013).
Pauli A.,et al.Science 343:1248636-1248636(2014).

Images



All lanes: Anti-(DANRE) aplnra Antibody (C-Term) at 1:1000 dilution + Zebrafish whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 41 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

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