10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Natriuretic Peptide Receptor A Rabbit pAb

Catalog # AP97518

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P16066
Other Accession	P16066
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	118919
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Natriuretic Peptide Receptor A
Epitope Specificity	261-360/1061
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the adenylyl cyclase class-4/guanylyl cyclase family.Contains 1 guanylate cyclase domain.Contains 1 protein kinase domain.
SUBUNIT	Homodimer.
Post-translational modifications	Phosphorylation of the protein kinase-like domain is required for full activation by ANP.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Guanylyl cyclases, catalyzing the production of cGMP from GTP, are classified as soluble and membrane forms (Garbers and Lowe, 1994 [PubMed 7982997]). The membrane guanylyl cyclases, often termed guanylyl cyclases A through F, form a family of cell-surface receptors with a similar topographic structure: an extracellular ligand-binding domain, a single membrane-spanning domain, and an intracellular region that contains a protein kinase-like domain and a cyclase catalytic domain. GC-A and GC-B function as receptors for natriuretic peptides; they are also referred to as atrial natriuretic peptide receptor A (NPR1) and type B (NPR2; MIM 108961). Also see NPR3 (MIM 108962), which encodes a protein with only the ligand-binding transmembrane and 37-amino acid cytoplasmic domains. NPR1 is a membrane-bound guanylate cyclase that serves as the receptor for both atrial and brain natriuretic peptides (ANP (MIM 108780) and BNP (MIM 600295), respectively).[supplied by OMIM, May 2009]

Additional Information

Gene ID	4881
Other Names	ANPRA_HUMAN; NPR1; Atrial natriuretic peptide receptor type A (ANP-A | ANPR-A | NPR-A); Guanylate cyclase A (GC-A); 4.6.1.2; ANPRA; ANPRA_RAT;

	natriuretic peptide receptor 1; atrionatriuretic peptide receptor A; natriuretic peptide receptor A; guanylate cyclase A
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
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	NPR1 (HGNC:7943)
Synonyms	ANPRA
Function	Receptor for the atrial natriuretic peptide NPPA/ANP and the brain natriuretic peptide NPPB/BNP which are potent vasoactive hormones playing a key role in cardiovascular homeostasis (PubMed:39543315). Plays an essential role in the regulation of endothelial cell senescence and vascular aging (PubMed:36016499). Upon activation by ANP or BNP, stimulates the production of cyclic guanosine monophosphate (cGMP) that promotes vascular tone and volume homeostasis by activation of protein kinase cGMP-dependent 1/PRKG1 and subsequently PRKAA1, thereby controlling blood pressure and maintaining cardiovascular homeostasis (PubMed:36016499).
Cellular Location	Membrane; Single-pass type I membrane protein.

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