

Product datasheet for RC209267

Natriuretic Peptide Receptor A (NPR1) (NM_000906) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Natriuretic Peptide Receptor A (NPR1) (NM_000906) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Natriuretic Peptide Receptor A
Synonyms:	ANPa; ANPRA; GUC2A; GUCY2A; NPRA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC209267 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

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Protein Sequence:

>RC209267 protein sequence
 Red=Cloning site Green=Tags(s)

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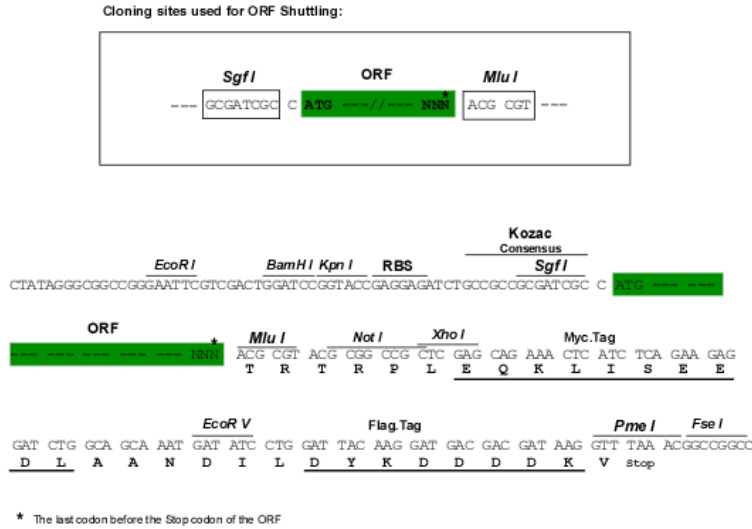
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Chromatograms:

https://cdn.origene.com/chromatograms/mk6263_g05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000906

ORF Size: 3183 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_000906.2](#), [NP_000897.2](#)

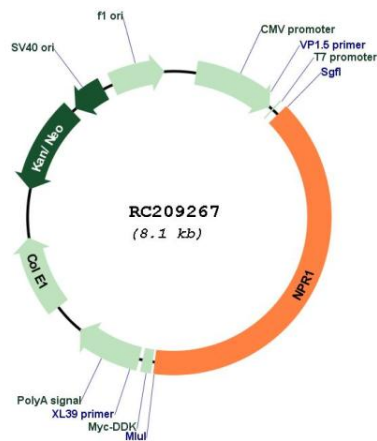
RefSeq Size: 4201 bp

RefSeq ORF: 3186 bp

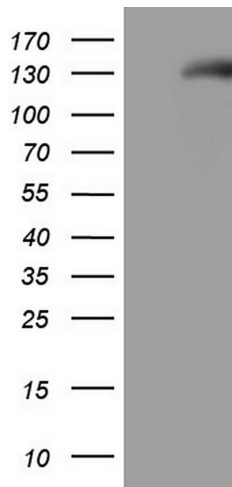
Locus ID: 4881
UniProt ID: [P16066](#)
Cytogenetics: 1q21.3
Domains: pkinase, CYCc, ANF_receptor
Protein Families: Druggable Genome, Protein Kinase
Protein Pathways: Purine metabolism, Vascular smooth muscle contraction
MW: 119 kDa

Gene Summary: 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]

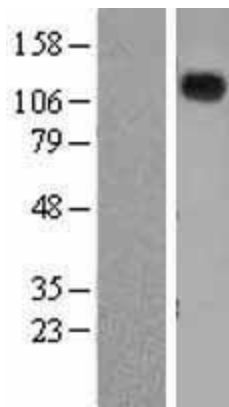
Product images:



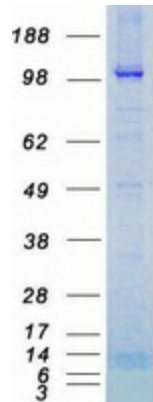
Circular map for RC209267



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY NPR1 (Cat# RC209267, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-NPR1 (Cat# [TA805600]). Positive lysates [LY424461] (100ug) and [LC424461] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424461]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209267 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NPR1 protein (Cat# [TP309267]). The protein was produced from HEK293T cells transfected with NPR1 cDNA clone (Cat# RC209267) using MegaTran 2.0 (Cat# [TT210002]).