

Product datasheet for **RG209267**

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: | TurboGFP |
| Symbol: | Natriuretic Peptide Receptor A |
| Synonyms: | ANPa; ANPRA; GUC2A; GUCY2A; NPRA |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |
| ORF Nucleotide Sequence: | >RG209267 representing NM_000906 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGGGGCCCCGGCGCCCGCTGGCTCCCGCCTGCGCCTGCTCCTGCTCCTGCTGCTGCCGCCGCTGC
TGCTGCTGCTCCGGGGCAGCCACGCGGGCAACCTGACGGTAGCCGTGGTACTGCCCTGGCCAATACCTC
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GACTTGCTGCCGGCTGGACGGTCCGCACGGTGTGGGACGAGCGAAAACGCGCTGGGCGTCTGCTCCG
ACACCGCAGCGCCCTGGCCGCGGTGGACCTCAAGTGGGAGCACAAACCCGCTGTGTTCTGGGCCCCGG
CTGCGTGTACGCCCGCCCGCCAGTGGGGCGCTTACCCGCGCACTGGCGGGTCCCGCTGCTGACCGCCGGC
GCCCGCGCTGGGCTTCGGTGTCAAGGACGAGTATGCGCTGACCACCCGCGCGGGGCCAGCTACGCCA
AGCTGGGGGACTTCGTGGCGCGCTGCACCGACGGCTGGGCTGGGAGCGCCAAGCGCTCATGCTCTACGC
CTACCGGCCGGGTGACGAAGAGCACTGCTTCTTCTCGTGGAGGGGTGTTATGCGGGTCCGCGACCCG
CTCAATATTACGGTGGACCACCTGGAGTTCGCCGAGGACGACCTCAGCCACTACACCAGGCTGCTGCGGA
CCATGCCGCGCAAAGGCCGAGTTATCTACATCTGCAGCTCCCTGATGCCTTCAAGCCCTCATGCTCCT
GGCCCTGGAAGCTGGCTTGTGTGGGAGGACTACGTTTTCTTCCACCTGGATATCTTTGGCAAAGCCTG
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CCCTGGGGTACCCTCCTCTGACATCCCAAATGTGGCTTGGACAACGAAGACCCAGCATGCAACCAAGA
TCACCTTCCACCCTGGAGGTGCTGGCTTGGTGGGACGCTCTCCTTGCTCGGCATTCTGATTGCTCC



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TTCTTCATATACAGGAAGATGCAGCTGGAGAAGGAACTGGCCTCGGAGCTGTGGCGGGTGCCTGGGAGG
ACGTTGAGCCCAGTAGCCTTGAGAGGCACCTGCGGAGTGACGGCAGCCGGCTGACCTGAGCGGGAGAGG
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GCTGTGCGCGGAGAGCACGCCATGCAGGTGGTACCCTGCTCAATGACCTGTACACTTGCCTTGTATGCT
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TGTGCTGGAGTGGTGGGACTGAAGATGCCCGTTACTGTCTTTGGGGATACAGTCAACACAGCCTCAA
GAATGGAGTCTAATGGGAAGCCCTGAAGATCCACTTGTCTTCTGAGACCAAGGCTGTCTGGAGGAGTT
TGGTGGTTTCGAGCTGGAGCTTCGAGGGATGTAGAAATGAAGGGCAAAGGCAAGTTTCGGACCTACTGG
CTCCTTGGGAGAGGGGGAGTAGCACCCGAGGC
    
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ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG209267 representing NM_000906

Red=Cloning site Green=Tags(s)

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MPGPRRPAQSRLRLLLLLPLLLLLRGSHAGNLTVAVVLPLANTSYPWSWARVGPAVELALAQVKARP
DLLPGWTVRTLGLSSENALGVCSDTAAPLAAVDLKWEHNPVFLGPGCVYAAAPVGRFTAHWRVPLLTAG
APALGFVGVKDEYALTRAGPSYAKLGDFVAALHRRLGWERQALMLYAYRPGDEEHCFLLVEGLFMRVDR
LNITVDHLEFAEDDL SHYTRLLRTMPRKGRVIYICSSPDAFRTLMLLALAEAGLCGEDYVFFHLDIFGQSL
QGGQGPAPRRPWERGQDVSARQAFQAAKIITYKDPDNPEYLFKQLKHLAYEQFNFTMEDVL VNTIP
ASFHDGLLLYIQAVTETLAHGGTVDGENITQRMWNRSFQGVTYLKIDSSGDRETD FSLWMDPENGAF
RVVLYNYNGTSQELVAVSGRKLNWPLGYPPPDIPKCGFDNEDPACNQDHLSTLEVLALVGSLSLLGILIVS
FFIYRKMQLKELASELWRVRWEDVEPSSLERHLRSAGSRLTSGRGSNYGSLLTTEGQFQVFAKTAYYK
GNLVAVKRVNRKRIELTRKVL FELKHMRDVQNEHLTRFVGACTDPPNICILTEYCPRGSQDILENESIT
LDWMFRYSLTNDIVKGMFLHNGAICSHGNLKSNSNCVVDGRFVLKITDYGLESFRDLDP EQGHTVYAKKL
WTAPELLRMA SPPVRSQAGDVYSFGIILQEIALRSGVFHVEGLDLSPKEI IERVTRGEQPPFRPSLALQ
SHLEELGLLMQRCWAEDPQERPPFQIRLTLRKFNRENSNILDNLLSRMEQYANNLEELVEERTQAYLE
EKRAEALLYQILPHSVAEQKRGETVQAEAFDSVTIYFSDIVGFTALSAESTPMQVVTLLNDLYTCFDA
VIDNFDVYKVETIGDAYMVVSGLPVRNGRLHACEVARMALALLDAVRSFRIRHRPQEQLRLRIGIHTGPV
CAGVVGLKMPRYCLFGDVTNTASRMESNGEALKIHL SSETKAVLEEFGGFELELRGDVEMKGGKGVRTYV
LLGERGSSTRG
    
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TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-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.

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

RefSeq Size: 4246 bp

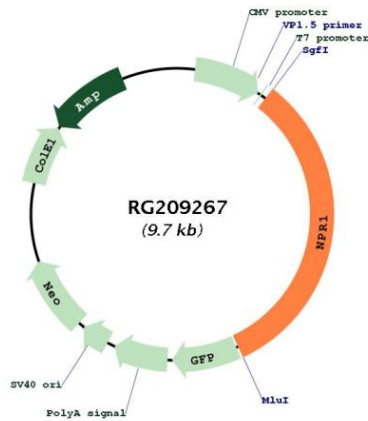
RefSeq ORF: 3186 bp

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

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 RG209267