

Product datasheet for **SC125506**

Natriuretic Peptide Receptor A (NPR1) (NM_000906) Human Untagged Clone

Product data:

| | |
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| Product Type: | Expression Plasmids |
| Product Name: | Natriuretic Peptide Receptor A (NPR1) (NM_000906) Human Untagged Clone |
| Tag: | Tag Free |
| Symbol: | Natriuretic Peptide Receptor A |
| Synonyms: | ANPa; ANPRA; GUC2A; GUCY2A; NPRA |
| Mammalian Cell Selection: | None |
| Vector: | <u>pCMV6-XL6</u> |
| E. coli Selection: | Ampicillin (100 ug/mL) |

Fully Sequenced ORF: >OriGene ORF sequence for NM_000906 edited
ATGCCGGGGCCCCGGCGCCCCGCTGGCTCCCGCCTGCGCCTCTCTGCTGCTGCTG
CCGCGCGTGTGCTGCTGCTGCTCCGGGGCAGCCACGCGGGCAACCTGACGGTAGCCGTGGTA
CTGCCGCTGGCCAATACCTCGTACCCCTGGTCTGGGCGCGCGTGGGACCCGCCGTGGAG
CTGGCCCTGGCCAGGTGAAGGCGCGCCCCGACTTGTGCGGGGTGGACGGTCCGCACG
GTGCTGGGAGCAGCAAAAACGCGCTGGGCGTCTGCTCCGACACCGCAGCGCCCCTGCC
GCGGTGGACCTCAAGTGGGAGCACAACCCCGCTGTGTTCTGGGCCCCGCTGCGTGTAC
GCCCGCGCCCCAGTGGGGCGCTTACCAGCGCACTGGCGGGTCCCCTGCTGACCGCCGGC
GCCCGCGCGTGGGCTTCGGTGTCAAGGACGAGTATGCGCTGACCACCCGCGGGGGCC
AGCTACGCCAAGCTGGGGACTTCGTGGCGCGCTGCACCGACGGCTGGGCTGGGAGCGC
CAAGCGCTCATGCTCTACGCTACCGGCGGGTGACGAAGAGCACTGCTTCTTCTCGTG
GAGGGGTGTTTCATGCGGGTCCGCGACCCCTCAATATTACGGTGGACCACTGGAGTTC
GCCGAGGACGACCTCAGCCACTACACCAGGCTGCTGCGGACCATGCCGCGAAAGCCGA
GTTATCTACATCTGCAGCTCCCCGATGCCTTCAGAACCCTCATGCTCCTGGCCCTGGAA
GCTGGCTGTGTGGGAGGACTACGTTTTCTCCACCTGGATATCTTTGGGCAAAGCCTG
CAAGGTGGACAGGGCCCTGCTCCCCGAGGCCCTGGGAGAGAGGGGATGGGACAGGATGTC
AGTGCCCGCCAGGCCTTCAGGCTGCCAAAATCATTACATATAAAGACCCAGATAATCCC
GAGTACTTGAATTCCTGAAGCAGTTAAACACCTGGCCTATGAGCAGTTCAACTTACC
ATGGAGGATGGCCTGGTGAACACCATCCAGCATCCTTCCACGACGGGCTCCTGCTCAT
ATCCAGGCAGTGACGGAGACTCTGGCACATGGGGAACTGTTACTGATGGGGAGAATC
ACTCAGCGGATGTGGAACCGAAGCTTTCAAGGTGTGACAGGATACCTGAAATTGATAGC
AGTGGCGATCGGGAAACAGACTTCTCCCTCTGGGATATGGATCCCAGAAATGGTGCCTTC
AGGGTTGTACTGAACTACAATGGGACTTCCAAGAGCTGGTGGCTGTGTCGGGGCGCAA
CTGAACTGGCCCCGTTACCCTCCTGACATCCCCAAATGTGGCTTTGACAACGAA
GACCCAGCATGCAACCAAGATCACCTTCCACCCTGGAGGTGCTGGCTTTGGTGGGCAGC
CTCTCCTTGCTCGGCATTCTGATTGTCTCCTTCTCATATACAGGAAGATGCAGCTGGAG
AAGGAAGTGGCCTCGGAGCTGTGGCGGGTGCCTGGGAGGACGTTGAGCCAGTAGCCTT



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GAGAGGCACCTGCGGAGTGCAGGCAGCCGGCTGACCCTGAGCGGGAGAGGCTCCAATTAC
 GGCTCCCTGCTAACCACAGAGGGCCAGTCCAAGTCTTTGCCAAGACAGCATATTATAAG
 GGCAACCTCGTGGCTGTGAAACGTGTGAACCGTAAACGCATTGAGCTGACACGAAAAGTC
 CTGTTTGAAGTGAAGCATATGCGGGATGTGAGAATGAACACCTGACCAGGTTTGTGGGA
 GCCTGCACCGACCCCAATATCTGCATCCTCACAGAGTACTGTCCCGTGGGAGCCTG
 CAGGACATTCGGAGAATGAGAGCATCACCTGGACTGGATGTTCCGGTACTCACTCACC
 AATGACATCGTCAAGGGCATGCTTTTCTACACAATGGGGCTACTGTTCCCATGGGAAC
 CTCAGTCATCCAACCTGGTGGTAGATGGGCGCTTTGTGCTCAAGATCACCGACTATGGG
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 GACGTATACAGCTTTGGGATCATCCTCAGGAGATTGCCCTGAGGAGTGGGGTCTCCAC
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 GAGACAATTGGCGATGCCTACATGGTGGTGTGAGGGCTCCCTGTGCGGAACGGGCGGCTA
 CACGCCGCGAGGTAGCCCGCATGGCCCTGGCACTGCTGGATGCTGTGCGCTCCTCCGA
 ATCCGCCACCGGCCAGGAGCAGCTGCGCTTGGCATTGGCATCCACACAGGACCTGTG
 TGTGCTGGAGTGGTGGGACTGAAGATGCCCGTTACTGTCTTTGGGGATACAGTCAAC
 ACAGCCTCAAGAATGGAGTCTAATGGGGAAGCCCTGAAGATCCACTTGTCTTCTGAGACC
 AAGGCTGTCTGGAGGAGTTTGGTGGTTTCGAGCTGGAGCTTCGAGGGGATGTAGAAATG
 AAGGGCAAAGGCAAGGTTTCGGACCTACTGGCTCCTTGGGAGAGGGGAGTAGCACCCGA
 GGCTGA

**5' Read Nucleotide
 Sequence:**

>OriGene 5' read for NM_000906 unedited
 ACCCCGCCGTTGNCGCAAAGGGCGGTAGGCGGTACGGTGGGAGGTCTATATAAGCAGA
 GCTCATTTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCAGCGGCCGGAAT
 TCGGCAGAGGGGAGGCCATGGTAGGAGCGCTCGCCTGCTGCGGTGCCCGTGAGGCCATG
 CCGGGGCCCGCGCCCCGCTGGCTCCCGCTGCGCCTGCTCCTGCTCCTGCTGCTGCCG
 CCGCTGCTGCTGCTCCGGGGCAGCCACGCGGGCAACCTGACGGTAGCCGTGGTACTG
 CCGCTGGCCAATACCTCGTACCCTGGTCTGGGCGCGCTGGGACCCCGCTGGAGCTG
 GCCCTGGCCAGGTGAAGGCGCGCCCCGACTTGTGCTGCCGGCTGGACGGTCCGCACGGT
 CTGGGCAGCAGCAAAAACGCGCTGGGCGTCTGCTCCGACACCGCAGCGCCCTGGCCGCG
 GTGGACCTCAAGTGGGAGCACAACCCCGCTGTGTTCTGGGCCCGGCTGCGTGTACGCC
 GCCGCCCAAGTGGGGCGCTTACCCGCGCACTGGCGGGTCCCGCTGCTGACCGCCGGCGCC
 CCGGCGCTGGGCTTCGGTGTCAAGGACGAGTATGCGCTGACCACCCGCGCGGGGCCAGC
 TACGCCAAGTGGGGGACTTCGTGGCGCGCTGCACCGACGGCTGGGCTGGGAGCGCAA
 GCGCTCATGCTCTACGCCTACCGNCGGGTACGAAGAGCACTGCTTCTTCTCGTGGAG
 GGGCTGTTATGCNNGTCCGCGACCGNCTCATATTACGGTGGACCACTGGAGNTCGCCG
 AGGACGACCTCAGNCACTACACCAGGCTGCTGCNNGACATGCCCGCGAAGGCCGAGTTA
 TCTACATCTGCAGCTCCCCTGATGCCTCAGAANCTCATGCTNCTGGCCCTGNAAGCTGCT
 GTGTGGGAGGACACNT

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|-------------------------------------|---|
| 3' Read Nucleotide Sequence: | >OriGene 3' read for NM_000906 unedited CCCGGCAATTGTGAGATTTAAACGTTCTTTCGCTCATGGTAGNAAGCAAGGCATACAGN GCCCCCAACCTTCTGCGCCACCCTCTTCTCCCCTGTGCACTGTGTCTACTGCTGGGTG GAGGGGTGCGGGGAGCAGGTATTGTGGGCCAGCCCCAGATGTGGGCTCCCCTGCCCTCT CTTACCTAGTCTCTTTTCATGTTCCCCTTCAGGTGACTCTTTCTCCTCCCAGTAAGTCA CAGGGTAGCAAGGCTGAGGGAGGAGAGCATGGGGAGGGGAGGGATCAGGAATCCACAGC CCAGCCCAGGCTGAGTCCAGGTGGAGAGCAGGTGCGTGTGCCTGTGTGAGTGTCCCTGTG CATGGCCGTGGGCTTGGCTCAGCCTGTAAGCTCTGAGATCCCCCATGCCAGTCCCCTCT CAGAGGTCTATCTGGTGTCTTCACTGGGGTCAGCACACCTGAGCTATTCAAATTACTTC CATCCTTTGGCGATGGGGCTGCTGTGGGTGAGGCTGAGGCCTGGCACCTCTGTTGCTTCT GGCACAGGGTAGGGGAGGTGTGGAGGGATAGGAGAGGAGGCAGGTGAGCCTCGGGTGCTA CTCCCCCTCTCCCAAGGAGCCAGTAGGTCCGAACCTTGCCTTTGCCCTTCATTTCTACA TCCCCTCGAAGCTCCAGCTCGAAACCACAACTCCTCCAGGACAGCCTTGGTCTCAGAA GACAAGTGGATCTTCAGGGCTTCCCATTAGACTCCATTCTTGAAGCTGTGTTGACTGGA TCCCCAAAGAGACAGTAACCGGGGCATCTTTCAGTCCCACCAATTCAGCACACACAGGTC CTGTGTGGATGCCAATGCGCAAGCGCAACTGCTCTGGA |
| Restriction Sites: | NotI-NotI |
| ACCN: | NM_000906 |
| Insert Size: | 3940 bp |
| OTI Disclaimer: | Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP). |
| 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: | <ol style="list-style-type: none"> 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]