

Product datasheet for **SC100713**

RASGRP 4 (RASGRP4) (NM_170603) Human Untagged Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | RASGRP 4 (RASGRP4) (NM_170603) Human Untagged Clone |
| Tag: | Tag Free |
| Symbol: | RASGRP 4 |
| Synonyms: | guanyl nucleotide releasing protein 4; RAS guanyl releasing protein 4 |
| Mammalian Cell Selection: | None |
| Vector: | <u>pCMV6-XL4</u> |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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Fully Sequenced ORF: >OriGene ORF within SC100713 sequence for NM_170603 edited (data generated by NextGen Sequencing)

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ATGAACAGAAAAGACAGTAAGAGGAAGTCCCACCAGGAATGCACCGAAAAACAGGAGGG
CGAGGCCGGCCCCGCCAAGTGCCGCCGCCACAAGACATGCCCCAGCCCTCGGGAATCAGC
AAGGTCATGGCTTCCATGAACCTGGGCCTGCTGAGTGAGGGCGGCTGCAGCGAAGATGAG
CTGCTGGAGAAATGCATCCAGTCCTTCGATTCAGCTGGCAGCCTGTGCCACGAGGACCAC
ATGCTCAACATGGTGTGCCCATGCACAGCTGGGTGCTGCCGTCCGCCGACCTGGCTGCC
CGCTTGCTGACCTCATACCAGAAGGCCACAGGGGACACCCAGGAGCTGAGACGGCTGCAG
ATCTGTACCTGGTCAGTACTGGCTGATGCGACACCCTGAGGTGATGCACCAGGATCCC
CAGCTAGAAGAAGTCATAGGTCGTTTCTGGGCCACCGTGGCCCGGGAGGGCAACTCAGCC
CAGAGAAGACTGGGAGACTCTTCTGACCTCCTGAGCCCTGGTGGCCCTGGCCCCCACTC
CCAATGAGCAGCCAGGCTGGGCAAAAAGCGCAAAGTGTCTTGGCTTTTCGACCACTTG
GAGACGGGGGAGCTGGCTCAGCACCTCACCTACCTGGAGTTCCGGTCTTCCAGGCTATC
ACGCCCCAGGACCTGCGGAGCTACGTTTTGCAGGGCTCAGTACGAGGCTGCCCGCCCTG
GAGGGCTCCGTAGGTCTCAGCAACAGCGTGTCCCGCTGGGTGCAGGTGATGGTGTGAGC
CGTCCCGGGCCCCACAGCGTGCACAGGTGCTGGACAAGTTCATTCACGTGGCACAGAGG
CTCCACCAGCTGCAGAATTTCAACACGCTGATGGCAGTACAGGGGGCCTGTGTACAGT
GCCATCTCCAGACTCAAGGACTCCCATGCCACCTGAGCCCTGACAGCACCAGGCCCTC
CTGGAGCTCACTGAGCTCCTTGCCCTCCACAACAACACTACGCCCGTACCGCCGACCTGG
GCTGGCTGCGCGGGTTTTCCGGCTGCCTGTACTGGGCGTGCACCTCAAGGACCTGGTGTCC
CTGCATGAGGCACAGCCCAGAGTTGCCTGACGGCCGCTGCACCTACCAAGCTGAAC
AACCTCTACCTGCGGCTGCAGGAGCTGGTGGCCCTCCAAGGGCAGCATCCACCCTGCAGC
GCCAATGAGGATCTGCTGCACCTGCTCAGCTCTCCCTGGACCTTCTACACGGAAGAC
GAGATCTATGAGCTTTCTTATGCCCGGGAGCCGGTTGTCCCAAGAGCCTGCCACCCTCC
CCCTTCAATGCACCTCTGGTGGTGGAGTGGGCCCTGGTGTGACACCCAAGCCGGACAGG
GTCACACTGGGTGCGCATGTGGAGCAGTGGTGGAGTCTGTGTTCAAGAATTATGACCCT
GAAGGCCGAGGAACAATCTCTCAGGAGGACTTTGAGCGACTCTCGGGCAATTTTCCCTTC
GCCTGCCATGGGTTTACCCACCCACGCCAGGGGAGAGGATCCTTCAGCAGAGAGGAG
CTGACAGGGTACCTGCTCCGGGCCAGGCCATCTGCTCCAAGTTGGCCCTGGCCTTCTG
CACACCTTCCATGAGGTACCTTCCGAAAGCCTACCTTCTGCGACAGCTGCAGTGGCTTC
CTCTGGGGTGTACCAAGCAAGGCTACCGCTGTGGGAGTGGGGCTGTGTTGCCACAAA
CACTGCAGAGACCAGGTGAAGGTAGAATGTAAGAAGAGGCCAGGGGCCAAGGGCGATGCA
GGACCCCGGAGCTCCTGTCCCATCCACACCAGCTCCCATGCCAGCTGTGGCTCCGAG
GAAAATCACTCCTACACGCTATCCCTGGAGCCTGAGACTGGGTGCCAGCTTCGCCATGCC
TGGACCCAGACTGAATCCCCACACCCTTCTGGGAAACAGATACGGTCCCTGCCCGGTG
ATGGACCCACCATCAACTGCATCCTCCAAGCTGGATTCTAG

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Clone variation with respect to NM_170603.1
53 t=>c

| | |
|-------------------------------------|---|
| 5' Read Nucleotide Sequence: | <p>>OriGene 5' read for NM_170603 unedited</p> <pre>CTCTGGAATTTGTAATACGACTTACTATAGNNGCGGCCGCGCAATTCGGCACCAGGCGG GAAGCATGAACAGAAAAGACAGTAAGAGGAAGTCCCACCAGGAATGCACCGGAAAAACAG GAGGGCGAGGCCGGCCCCGCAAGTGCGCCGCCACAAGACATGCCCCAGCCCTCGGGAAA TCAGCAAGGTCATGGCTTCCATGAACCTGGGCCTGCTGAGTGAGGGCGGCTGCAGCGAAG ATGAGCTGCTGGAGAAATGCATCCAGTCCTTCGATTGAGCTGGCAGCCTGTGCCACGAGG ACCACATGCTCAACATGGTGTGGCCATGCACAGCTGGGTGCTGCCGTCGCCGACCTGG CTGCCCCGCTGCTGACCTCATACCAGAAGGCCACAGGGGACACCCAGGAGCTGAGACGGC TGCAGATCTGTACCTGGTCAGGTAAGTGGCTGATGCGACACCCTGAGGTGATGCACCAGG ATCCCCAGCTAGAAGAAGTCATAGTTCGTTTCTGGGCCACCGTGGCCCGGGAGGGCAACT CAGCCCAGAGAAGACTGGGAGACTCTTCTGACCTCCTGAGCCCTGGTGGCCCTGGCCCC CACTCCCAATGAGCAGCCAGGCCTGGGCAAAGCGCANAGTGCCTTGCCTTTTCGACCC TTGGAGACGGGGAGCTGGCTCAGCACCTCACCTACCTGGAGTCCGGTCTTNNCAGCT ATCACGCCCCAGGACCTGCGAGTACGTTTTGCAGGGCTCAGTACGAGGCTGCCCGCCC TGGAGGGCTCCGTAAGTCTCAGCACAGCGTGTCCNGCTGGTGCAGTGATGGTGTGANC CCNTCCGGGCCNTACAGTGCACAGTGTGGACAGTTTATTCTTGCACAGAGGCTCCA CAGCTGCCGATTCCACCCTGATGGCATAAAGGGGGCCTGGTCCAATGGCATTTCAAA</pre> |
| 3' Read Nucleotide Sequence: | <p>>OriGene 3' read for NM_170603 unedited</p> <pre>GAAAATAGTGAATTTNAATTTTCGNACATCTGTGGGTACCTCTCTCTGTGGGGCCCAATCG GGGTGTTGGGGTTTGTGAAGGGTTGGGGGGTCTCTGCTCCCTGGGACTGAATGGGCC CTGCTGCTCGACCCTCAAAGTTCTTGGCCATAGCACATCTATCCTGTGCCGTGGGCAT GGGTAAGGAGACATTCAGGCATCAGACAAGCATCTGTCTTGTTCCTACCACCTGCCAGCC CTGTTCTAGGCACTGGGGATGCAGCAGTGAATGACATTGATAGAAATCCCTGTTCTCCTG GAGTTGATGCTCCTGTTGAGAAAGACAGACGTTCAACGAGATAAAGAGGGAAAAAGTAT AGGCTGTGAGAGGGAGCATTCTATGCAGAAAAACAGGAGCTGGGCGTGGTGGCTCACG CCTGTATTCCCAGCACTTTGGGAGGCTGAGGCTGGTGGATCATGAGGTCAGGAGTTTGA ACCATCTTGGCCAACATGGGGAAACCCCGTCTCTACTAAAAATACAAAAATTAGCCGGGC ATGGTGGCGCGTGCCTGTAATCCCAGCTACTTGGCAGGCTGAGGCAGAAGAATCACTTTG ACCCAGNAGCGGAAGTTGCAGTGAGCTGAGATTGCATCATTGCACTCCAGCCTGGGTGA CAGAGCAAGACTCTGTCTAAAAAAGAAATGGAATGTAGGGAGTTGGTAAGAATAA GCCCTGAGTCTTAATGTTTTCAACACACAGGCCACAGAATCCTAAATGCAGGGAAAGG GAGCACGGGATTACCATCCCCAGGATGCCAAATAAGAAAGTCACTTCCCGTGGAAAAAG GAGACCGGCTCCACCTTAAAGCCACTTTGGATTGGGAAAGCCGGTTGCCTTTGGGGGC CCTCTTTTGGGAACCTGCCAAAATTTACCGCAGGACCTAGACCTGACGGG</pre> |
| Restriction Sites: | NotI-NotI |
| ACCN: | NM_170603 |
| Insert Size: | 3000 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:

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_170603.1](#), [NP_733748.1](#)

RefSeq Size: 2634 bp

RefSeq ORF: 2634 bp

Locus ID: 115727

Cytogenetics: 19q13.2

Domains: RasGEF, DAG_PE-bind

Protein Families: Druggable Genome

Protein Pathways: MAPK signaling pathway

Gene Summary: The protein encoded by this gene is a member of the Ras guanyl nucleotide-releasing protein (RasGRP) family of Ras guanine nucleotide exchange factors. It contains a Ras exchange motif, a diacylglycerol-binding domain, and two calcium-binding EF hands. This protein was shown to activate H-Ras in a cation-dependent manner in vitro. Expression of this protein in myeloid cell lines was found to be correlated with elevated level of activated RAS protein, and the RAS activation can be greatly enhanced by phorbol ester treatment, which suggested a role of this protein in diacylglycerol regulated cell signaling pathways. Studies of a mast cell leukemia cell line expressing substantial amounts of abnormal transcripts of this gene indicated that this gene may play an important role in the final stages of mast cell development. Multiple transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Apr 2009]

Transcript Variant: This variant (1) encodes the longest isoform (1).