

## Product datasheet for **RC212473**

### **RASGRP1 (NM\_005739) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	RASGRP1 (NM_005739) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RASGRP1
Synonyms:	CALDAG-GEFI; CALDAG-GEFII; IMD64; RASGRP
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide  
Sequence:**

>RC212473 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGCACCCCTGGGCAAGGCGAGAGAGGCTCCGCGGAAACCTTCCATGGCTGCAGAGCTGCCTCTAAAG  
 CAAGACTAGAGGCAAAGCCAGCCAAACAGCCCTTCCCCTCCCATCCCAGCTTGGCCACATCACCCAGTT  
 CCGAATGATGGTGTCTCTGGGACATTTAGCCAAAGGAGCCAGCCTGGACGATCTCATTGACAGCTGCATT  
 CAATCTTTTGTGAGATGGAAACCTGTGTGCAAGTAACCAACTGTTGCAAGTCATGCTGACCATGCACC  
 GAATTGTCATCTCCTCTGCAGAAGTCTCCAAAAAGTTATCACCCCTCTATAAGGATGCTTTGGCAAAGAA  
 TTCACCAGGACTTTGCCTGAAGATCTGTTATTTTGAAGTATTGGATAACAGAATTCTGGGTGATGTTT  
 AAAATGGACGCCAGCTTGACAGACACTATGGAGGAGTTTCAGGAAGTGGTAAAGCTAAGGGTGAGGAGT  
 TACATTGCCGCTGATTGACACAACCAATCAATGCCCGTGACTGGTCCAGGAACTTACTCAAAGGAT  
 AAAATCAATACCAGCAAGAAACGAAAGTCTCCCTGCTTTTGACCATCTGGAACAGAAAGAGCTATCC  
 GAGCACCTCACCTACCTTGAAGTCAAGTCTTCCGGAGGATATCGTTCTCTGATTATCAGAATTACCTTG  
 TAAATAGCTGTGTGAAGGAAAACCCACCATGGAGCGATCTATTGCTCTGTGCAACGGCATCTCCCAGTG  
 GGTACAACCTGATGGTTCTCAGCCGCCCCACGCCGAGCTCCGAGCAGAAGTCTTCATCAAGTTTATCCAG  
 GTGGCTCAGAAGCTCCACCAACTACAGAAGTCAATACACTGATGGCTGTGATAGGTGGGCTGTGTGACA  
 GCTCAATCTCGAGGCTCAAGGAGACAAGTTCGCATGTCCACATGAAATCAATAAGGTTCTCGGTGAGAT  
 GACTGAGCTGTGCTCCTCCTCCAGAACTACGACAATTACCGGCGAGCCTATGGAGAGTGCACCGACTTC  
 AAGATCCCCATTTGGGTGTGCATCTCAAGGACCTCATCTCCCTGTATGAAGCCATGCCTGACTATCTGG  
 AGGACGGGAAAGTGAACGTCCATAAGCTACTGGCCCTATAACAATCATATCAGTGAATGGTCCAGTGC  
 AGAGGTGGCCCCACCCTTGGAGGCTAACAAGGACTTGGTACACTTGTGACGTTATCCCTGGATCTTTAC  
 TACACTGAGGATGAAATCTATGAGCTTTCTATGCCCGGGAACCAAGGAACACAGAGCTCCACCACTAA  
 CACCTTCAAAGCCACAGTAGTAGTGGACTGGGCTTCTGGAGTGTCTCCCAAACCTGATCCAAAAACCAT  
 TAGCAAACACGTCCAGAGGATGGTGGATTCTGTCTTCAAGAACTATGATCAGCACCAGGATGGATACATT  
 TCTCAGGAAGAATTTGAAAAGATTGCTGCGAGTTTTCCATTTTCTTCTGTGTGATGGACAAAGACAGGG  
 AAGGCCTCATCAGCAGGGATGAGATCACAGCCTACTTCATGAGAGCCAGCTCAATCTATTCCAAGCTGGG  
 CCTGGGCTTTCTCACAACCTTCCAAGAGACCACCTACCTGAAGCCCACTTTTTGTGACAACCTGTGCTGGA  
 TTTCTCTGGGAGTGATCAAACAAGGATATCGATGTAAGACTGCGGGATGAACTGTCAAAACAATGCA  
 AAGATCTGGTTGTGTTTGTAGTGTAAAGAGCGACCAAGAACCCAGTAGCTCCACAGAGAACAACACTTC  
 TGTGGGGCCAGTGTCCAACCTTTGCTCATTGGGAGCCAAAGATCTGCTCCATGCACCTGAGGAAGGACCT  
 TTTACATTCCTAATGGGGAGGCTGTGGAACATGGTGAGGAGAGTAAGGATCGGACCATCATGCTGATGG  
 GAGTGTCTCACAGAAGATTTCTCTTGGCTGAAGAGGGCTGTTGCCACAAGGCCACCCAGACTGAATC  
 ACAGCCTTGGATTGGCAGTGAGGGCCCTCAGGTCCCTTTGTGCTGTCTTCCCAAGGAAGACAGCCAG  
 GATACTCTATATGTGCTTCCCAGTCCCACCTCTCCATGTCTAGCCAGCTTGGTCAGAAAGCGGGCTT  
 TTGTCAAGTGGGAGAATAAAGACTCCCTCATAAAATCAAAGGAGGAGCTCCGTCACCTCAGACTGCCTAC  
 CTACCAAGAAGTGAACAGGAAATAAATACTCTGAAAGCAGATAATGATGCCCTAAAGATCCAACCTGAAA  
 TATGCACAGAAGAAAATAGAATCCCTCCAGCTTAAAAAAGCAATCATGTCTTAGCTCAAATGGAGCAGG  
 GTGACTGTTCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC212473 protein sequence  
Red=Cloning site Green=Tags(s)

MGTLGKAREAPRKPSHGCRAASKARLEAKPANSPPFSPHPSLAHITQFRMMVSLGHLAKGASLDDLIDSCI  
QSFDADGNLCRSNQLLQVMLTMHRIVISSAELLQKVITLYKDALAKNSPGLCLKICYFVRYWITEFWVMF  
KMDASLTDMEEFQELVKAKGEELHCRLIDTTQINARDWSRKLTORIKSNTSKKRKVSLLFDHLEPEELS  
EHLTYLEFKSFRRISFSDYQNYLVNSCVKENPTMERSIALCNGISQWVQLMVL SRPTQLRAEVFIKFIQ  
VAQKLHQLQNFNTLMAVIGGLCHSSISRLKETSSHVPHEINKVLGEMTELLSSSRNYDNYRRAYGECTDF  
KIPILGVHLKDLISLYEAMPDYLEDGKVN VHKLLALYNHISELVQLQEVAPPLEANKDLVHLLTLSLDLY  
YTEDEIYELSYAREPRNHRAPPLTPSKPPVVVDWASGVSPKDPKTIKSHVQRMVDSVFKNYDHDQDGYI  
SQEEFEKIAASFPPSFCVMDKDREGLISRDEITAYFMRASSIYSKLGFGPHNFQETTYLKPTFCDNACG  
FLWGVIKQGYRCKDCGMNCHKQCKDLVVFECCKRAKNPVAPTENNTSVGPVSNLCSLGAKDLLHAPEEGP  
FTFPNGEAVEHGEEKDRTIMLMGVSSQKISLR LKRAVAHKATQTESQPWIGSEGPSGPFVLSPPRKAQ  
DTLYVLPSPSPCPVLRKRAFVKWENKDSL IKSKEELRHLRLPTYQELEQEINTLKADNDALKIQLK  
YAQKKIESLQLEKSNHVLAQMEQGDCS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6446\\_a11.zip](https://cdn.origene.com/chromatograms/mk6446_a11.zip)

**Restriction Sites:** Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_005739

**ORF Size:** 2391 bp

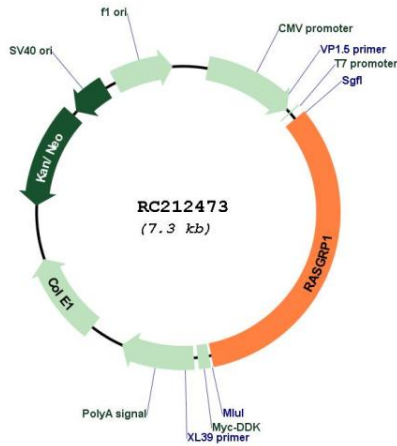
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

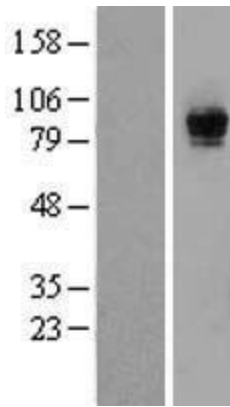
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_005739.4</a>
<b>RefSeq Size:</b>	5048 bp
<b>RefSeq ORF:</b>	2394 bp
<b>Locus ID:</b>	10125
<b>UniProt ID:</b>	<a href="#">O95267</a>
<b>Cytogenetics:</b>	15q14
<b>Domains:</b>	RasGEFN, RasGEF, EFh, DAG_PE-bind
<b>Protein Pathways:</b>	MAPK signaling pathway, T cell receptor signaling pathway
<b>MW:</b>	90.4 kDa
<b>Gene Summary:</b>	<p>This gene is a member of a family of genes characterized by the presence of a Ras superfamily guanine nucleotide exchange factor (GEF) domain. It functions as a diacylglycerol (DAG)-regulated nucleotide exchange factor specifically activating Ras through the exchange of bound GDP for GTP. It activates the Erk/MAP kinase cascade and regulates T-cells and B-cells development, homeostasis and differentiation. Alternatively spliced transcript variants encoding different isoforms have been identified. Altered expression of the different isoforms of this protein may be a cause of susceptibility to systemic lupus erythematosus (SLE). [provided by RefSeq, Jul 2008]</p>

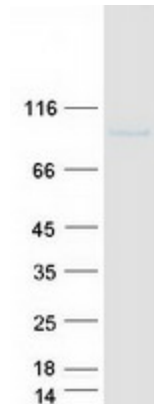
Product images:



Circular map for RC212473



Western blot validation of overexpression lysate (Cat# [LY417099]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212473 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified RASGRP1 protein (Cat# [TP312473]). The protein was produced from HEK293T cells transfected with RASGRP1 cDNA clone (Cat# RC212473) using MegaTran 2.0 (Cat# [TT210002]).