

## Product datasheet for **RC402812**

### **RASSF1 (NM\_007182) Human Mutant ORF Clone**

#### **Product data:**

Product Type:	Mutant ORF Clones
Product Name:	RASSF1 (NM_007182) Human Mutant ORF Clone
Mutation Description:	A133S
Affected Codon#:	133
Affected NT#:	397
Nucleotide Mutation:	RASSF1 Mutant (A133S), Myc-DDK-tagged ORF clone of Homo sapiens Ras association (RalGDS/AF-6) domain family member 1 (RASSF1), transcript variant A as transfection-ready DNA
Effect:	Lung cancer, increased risk, association with
Symbol:	RASSF1
Synonyms:	123F2; NORE2A; RASSF1A; RDA32; REH3P21
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_007182
ORF Size:	1020 bp
Restriction Sites:	Sgfl-Mlul



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**ORF Nucleotide Sequence:**

>RC402812 representing NM\_007182  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGTCGGGGGAGCCTGAGCTCATTGAGCTGCGGGAGCTGGCACCCGCTGGGCGCGCTGGGAAGGGCCGCA  
 CCCGGCTGGAGCGTGCCAACGCGCTGCGCATCGCGGGGGCACCGCGTGCAACCCACACGGCAGCTGGT  
 CCCTGGCCGTGGCCACCGCTTCCAGCCCGGGGCCCGCCACGCACACGTGGTGCACCTCTGTGGCGAC  
 TTCATCTGGGCGCTGTGCGCAAAGGCCTGCAGTGCAGCATTGCAAGTTCACCTGCCACTACCGCTGCC  
 GCGCGCTCGTCTGCCTGGACTGTTGCGGGCCCCGGACCTGGGCTGGAAACCCGCGGTGGAGCGGGACAC  
 GAACGTGGACGAGCCTGTGGAGTGGGAGACACCTGACCTTTCTCAATCTGAGATTGAGCAGAAGATCAAG  
 GAGTACAATGCCAGATCAACAGCAACCTTTCATGAGCTTGAACAAGGACGGTCTTACACAGGCTTCA  
 TCAAGTTTCAAGCTGAAGCTGGTGCGCCCTGTCTCTGTGCCCTCCAGCAAGAAGCCACCCTCCTTGCAGGA  
 TGCCCGCGGGGCCAGGACGGGGCACAAGTGTGAGGCGCCGACTTCTTTTACCTGCCAAGGATGCT  
 GTCAAGCACCTGCATGTGCTGTACGCACAAGGCGACGTGAAGTATTGAGGCCCTGCTGCGAAAGTTCT  
 TGGTGGTGGATGACCCCGCAAGTTTGCCTCTTTGAGCGCGCTGAGCGTCACGGCCAAGTGTACTTGGG  
 GAAGCTGTTGGATGATGAGCAGCCCCTGCGGCTGCGGCTCCTGGCAGGGCCAGTGACAAGGCCCTGAGC  
 TTTGTCCTGAAGGAAAATGACTCTGGGGAGGTGAAGTGGGACGCTTACAGCATGCCTGAACTACATAACT  
 TCCTACGTATCTGCAGCGGGAGGAGGAGGACACCTCCGCCAGATCTGCAGAAGTACTCTATTGCCG  
 CCAGAAGATCCAAGAGGCCCTGCACGCTGCCCCCTGGG

ACGCGTACGCGCGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

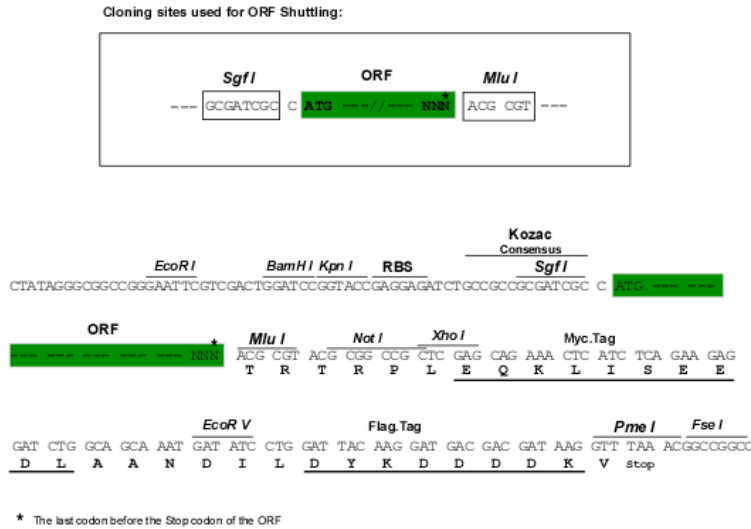
>RC402812 representing NM\_007182  
 Red=Cloning site Green=Tags(s)

MSGEPELIELRELAPAGRAGKGRTRLERANALRIARGTACNPTRQLVPGRGHRFPAGPATHTWCDLCGD  
 FIWGVVRKGLQCAHCKFTCHYRCRALVCLDCCGPRDLGWEP AVERDTNVDEPVEWETPDL SQSEIEQKIK  
 EYNAQINSNLFMSLNKDGSYTGF IKVQLKLV RPVSVSPSKPPSLQDARRGPRGTSVRRRTSFYLPKDA  
 VKHLHVL SRTRAREVIEALLRKFLVDDPRKFA LFERAERHGQVYLRKLLDDEQPLRLLLAGPSDKALS  
 FVLKENDSGEVNWDASFMP ELHNFLRILQREEEHLRQILQKYSYCRQKIQEALHACPLG

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**

**OTI Disclaimer:**

Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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).

**RefSeq:**

[NP\\_009113](#)

**RefSeq Size:**

1020 bp

**RefSeq ORF:**

1023 bp

**Locus ID:**

11186

**Cytogenetics:**

3p21.31

**Domains:**

RA, DAG\_PE-bind

**Protein Families:**

Druggable Genome

**Protein Pathways:**

Bladder cancer, Non-small cell lung cancer, Pathways in cancer

**MW:** 37.4 kDa

**Gene Summary:** This gene encodes a protein similar to the RAS effector proteins. Loss or altered expression of this gene has been associated with the pathogenesis of a variety of cancers, which suggests the tumor suppressor function of this gene. The inactivation of this gene was found to be correlated with the hypermethylation of its CpG-island promoter region. The encoded protein was found to interact with DNA repair protein XPA. The protein was also shown to inhibit the accumulation of cyclin D1, and thus induce cell cycle arrest. Several alternatively spliced transcript variants of this gene encoding distinct isoforms have been reported. [provided by RefSeq, May 2011]