

## Product datasheet for RC400133

### OriGene Technologies, Inc.

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# p21 Ras (HRAS) (NM\_005343) Human Mutant ORF Clone

### **Product data:**

**Product Type:** Mutant ORF Clones

Product Name: p21 Ras (HRAS) (NM 005343) Human Mutant ORF Clone

Mutation Description: Q61K

Affected Codon#: 61

Affected NT#: c.181

Nucleotide Mutation: HRAS mutant (Q61K), Myc-DDK-tagged ORF clone of Homo sapiens v-Ha-ras Harvey rat

sarcoma viral oncogene homolog (HRAS), transcript variant 1 as transfection-ready DNA

Effect: Missense

Symbol: HRAS

Synonyms: C-BAS/HAS; C-H-RAS; C-HA-RAS1; CTLO; H-RASIDX; HAMSV; HRAS1; p21ras; RASH1

E. coli Selection: Kanamycin (25 ug/mL)

Mammalian Cell

Selection:

Neomycin

**Vector:** pCMV6-Entry (PS100001)

Tag: Myc-DDK
ACCN: NM 005343

ORF Size: 569 bp

**Restriction Sites:** Sgfl-Mlul



ORF Nucleotide Sequence:

>RC400133 representing NM\_005343

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCC

ATGACGGAATATAAGCTGGTGGTGGTGGGCGCCGGCGGTGTGGGCAAGAGTGCGCTGACCATCCAGCTGA
TCCAGAACCATTTTGTGGACGAATACGACCCCACTATAGAGGATTCCTACCGGAAGCAGGTGGTCATTGA
TGGGGAGACGTGCCTGTTGGACATCCTGGATACCGCCGGCAAGGAGGAGTACAGCGCCATGCGGGACCAG
TACATGCGCACCGGGGAGGGCTTCCTGTGTGTTTTGCCATCAACAACACCAAGTCTTTTTGAGGACATCC
ACCAGTACAGGGAGCAGATCAAACGGGTGAAGGACTCGGATGACGTGCCCATGGTGCTGGTGGGGAACAA
GTGTGACCTGGCTGCACGCACTGTGGAATCTCGGCAGGCTCAGGACCTCGCCCGAAGCTACGGCATCCCC
TACATCGAGACCTCGGCCAAGACCCGGCAGGGAGTGGAGGATGCCTTCTACACGTTGGTGCGTGAGATCC
GGCAGCACAAGCTGCGGAAGCTGAACCCTCCTGATGAGAGTGGCCCCGGCTGCATGAGCTGCAAGTGTGT
GCTCTCC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATTACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** 

>RC400133 representing NM\_005343 Red=Cloning site Green=Tags(s)

MTEYKLVVVGAGGVGKSALTIQLIQNHFVDEYDPTIEDSYRKQVVIDGETCLLDILDTAGKEEYSAMRDQ YMRTGEGFLCVFAINNTKSFEDIHQYREQIKRVKDSDDVPMVLVGNKCDLAARTVESRQAQDLARSYGIP YIETSAKTRQGVEDAFYTLVREIRQHKLRKLNPPDESGPGCMSCKCVLS

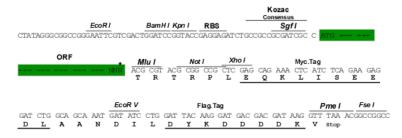
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** 

Sgfl-Mlul

Cloning Scheme:





<sup>\*</sup> The last codon before the Stop codon of the ORF



**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 <a href="mailto:customercom">customercom</a> 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. <u>More info</u>

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 005334

 RefSeq Size:
 1061 bp

 RefSeq ORF:
 570 bp

 Locus ID:
 3265

 Cytogenetics:
 11p15.5

**Protein Families:** Druggable Genome

**Protein Pathways:** Acute myeloid leukemia, Axon guidance, B cell receptor signaling pathway, Bladder cancer,

Chemokine signaling pathway, Chronic myeloid leukemia, Endocytosis, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, Focal adhesion, Gap junction, Glioma, GnRH signaling pathway, Insulin signaling pathway, Long-term depression, Long-term potentiation, MAPK signaling pathway, Melanogenesis, Melanoma, Natural killer cell mediated

cytotoxicity, Neurotrophin signaling pathway, Non-small cell lung cancer, Pathways in cancer, Prostate cancer, Regulation of actin cytoskeleton, Renal cell carcinoma, T cell receptor

signaling pathway, Thyroid cancer, Tight junction, VEGF signaling pathway





#### **Gene Summary:**

This gene belongs to the Ras oncogene family, whose members are related to the transforming genes of mammalian sarcoma retroviruses. The products encoded by these genes function in signal transduction pathways. These proteins can bind GTP and GDP, and they have intrinsic GTPase activity. This protein undergoes a continuous cycle of de- and repalmitoylation, which regulates its rapid exchange between the plasma membrane and the Golgi apparatus. Mutations in this gene cause Costello syndrome, a disease characterized by increased growth at the prenatal stage, growth deficiency at the postnatal stage, predisposition to tumor formation, cognitive disability, skin and musculoskeletal abnormalities, distinctive facial appearance and cardiovascular abnormalities. Defects in this gene are implicated in a variety of cancers, including bladder cancer, follicular thyroid cancer, and oral squamous cell carcinoma. Multiple transcript variants, which encode different isoforms, have been identified for this gene. [provided by RefSeq, Jul 2008]