

Product datasheet for **RC400114**

KRAS (NM_004985) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	KRAS (NM_004985) Human Mutant ORF Clone
Mutation Description:	Q61R
Affected Codon#:	61
Affected NT#:	c.182
Nucleotide Mutation:	KRAS mutant (Q61R), Myc-DDK-tagged ORF clone of Homo sapiens v-Ki-ras2 Kirsten rat sarcoma viral oncogene homolog (KRAS), transcript variant b as transfection-ready DNA
Effect:	Missense
Symbol:	KRAS
Synonyms:	C-K-RAS; c-Ki-ras2; CFC2; K-Ras; K-RAS2A; K-RAS2B; K-RAS4A; K-RAS4B; KI-RAS; KRAS1; KRAS2; NS; NS3; RALD; RASK2
E. coli Selection:	Kanamycin (25 ug/mL)
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
Tag:	Myc-DDK
ACCN:	NM_004985
ORF Size:	566 bp
Restriction Sites:	Sgfl-Mlul



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ORF Nucleotide Sequence:

>RC400114 representing NM_004985
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACTGAATATAAACTTGTGGTAGTTGGAGCTGGTGGCGTAGGCAAGAGTGCCTTGACGATACAGCTAA
 TTCAGAATCATTTTGTGGACGAATATGATCCAACAATAGAGGATTCTACAGGAAGCAAGTAGTAATTGA
 TGGAGAAACCTGTCTCTTGGATATTCTCGACACAGCAGGTCGAGAGGAGTACAGTGAATGAGGGACCAG
 TACATGAGGACTGGGGAGGGCTTTCTTTGTGTATTTGCCATAAATAACTAAATCATTTGAAGATATTC
 ACCATTATAGAGAACAAATTAAGAGTTAAGGACTCTGAAGATGTACCTATGGTCTAGTAGGAAATAA
 ATGTGATTTGCCTTCTAGAACAGTAGACACAAAACAGGCTCAGGACTTAGCAAGAAGTTATGGAATTCCT
 TTTATTGAAACATCAGCAAAGACAAGACAGGTTGTTGATGATGCCTTCTATACATTAGTTCGAGAAATTC
 GAAAACATAAAGAAAAGATGAGCAAAGATGGTAAAAAGAAGAAAAGAAGTCAAAGACAAAGTGTGTAAT
 TATG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC400114 representing NM_004985
 Red=Cloning site Green=Tags(s)

MTEYKL VVGAGGVGKSALTIQLIQNHVDEYDPTIEDSYRKQVVIDGETCLLDILDAGREEYSAMRDQ
 YMRTEGEGFLCVFAINNTKSFEDIHHYREQIKRVKDSSEVPMVLVGNKCDLPSRTVDTKQAQDLARSYGIP
 FIETSAKTRQGVDDAFYTLVREIRKHKEKMSKDGKKKKKSKTKCVIM

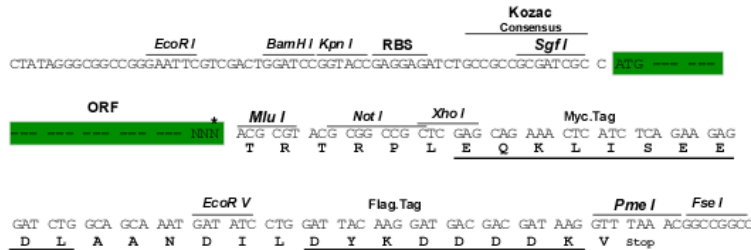
TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* 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 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_004976](#)

RefSeq Size: 5312 bp

RefSeq ORF: 567 bp

Locus ID: 3845

Cytogenetics: 12p12.1

Domains: ras, RAS, RHO, RAB

Protein Families: Druggable Genome

Protein Pathways: Acute myeloid leukemia, Axon guidance, B cell receptor signaling pathway, Bladder cancer, Chemokine signaling pathway, Chronic myeloid leukemia, Colorectal cancer, Dorso-ventral axis formation, Endometrial cancer, ErbB signaling pathway, Fc epsilon RI signaling pathway, 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, Pancreatic cancer, Pathways in cancer, Progesterone-mediated oocyte maturation, 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, a Kirsten ras oncogene homolog from the mammalian ras gene family, encodes a protein that is a member of the small GTPase superfamily. A single amino acid substitution is responsible for an activating mutation. The transforming protein that results is implicated in various malignancies, including lung adenocarcinoma, mucinous adenoma, ductal carcinoma of the pancreas and colorectal carcinoma. Alternative splicing leads to variants encoding two isoforms that differ in the C-terminal region. [provided by RefSeq, Jul 2008]