

Product datasheet for **RC400109**

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:	G12V
Affected Codon#:	12
Affected NT#:	c.35
Nucleotide Mutation:	KRAS mutant (G12V), 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
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:

>RC400109 representing NM_004985
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGACTGAATATAAACTTGTGGTAGTTGGAGCTGTTGGCGTAGGCAAGAGTGCCTTGACGATACAGCTAA
 TTCAGAATCATTTTGTGGACGAATATGATCCAACAATAGAGGATTCTACAGGAAGCAAGTAGTAATTGA
 TGGAGAAACCTGTCTCTTGGATATTCTCGACACAGCAGGTCAAGAGGAGTACAGTGAATGAGGGACCAG
 TACATGAGGACTGGGGAGGGCTTTCTTTGTGTATTTGCCATAAATAACTAAATCATTTGAAGATATTC
 ACCATTATAGAGAACAAATTAAGAGTTAAGGACTCTGAAGATGTACCTATGGTCTAGTAGGAAATAA
 ATGTGATTTGCCTTCTAGAACAGTAGACACAAAACAGGCTCAGGACTTAGCAAGAAGTTATGGAATTCCT
 TTTATTGAAACATCAGCAAAGACAAGACAGGTGTTGATGATGCCTTCTATACATTAGTTCGAGAAATTC
 GAAAACATAAAGAAAAGATGAGCAAAGATGGTAAAAAGAAGAAAAGAAGTCAAAGACAAAGTGTGTAAT
 TATG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

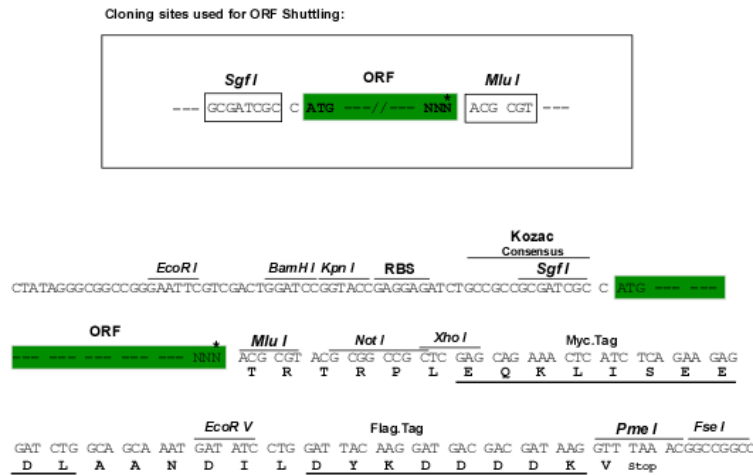
>RC400109 representing NM_004985
 Red=Cloning site Green=Tags(s)

MTEYKLVVVGAVGVGKSALTIQLIQNHFVDEYDPTIEDSYRKQVVIDGETCLLDILDTAGQEEYSAMRDQ
 YMRTGEGFLCVFAINNTKSFEDIHHYREQIKRVKDSSEDPVMVLVGNKCDLPSRTVDTKQAQDLARSYGIP
 FIETSAKTRQGVDDAFYTLVREIRKHKEKMSKDGGKKKKKSKTKCVIM

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfi-MluI

Cloning Scheme:


* The last codon before the Stop codon of the ORF

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).
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]