

## Product datasheet for **RG201958**

### **KRAS (NM\_004985) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	KRAS (NM_004985) Human Tagged ORF Clone
Tag:	TurboGFP
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-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG201958 representing NM_004985 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACTGAATATAAACTTGTGGTAGTTGGAGCTGGTGGCGTAGGCAAGAGTGCCTTGACGATACAGCTAA  
TTCAGAATCATTTTGTGGACGAATATGATCCAACAATAGAGGATTCCTACAGGAAGCAAGTAGTAATTGA  
TGGAGAAACCTGTCTCTTGGATATTCTCGACACAGCAGGTATGAGGAGTACAGTGAATGAGGGACCAG  
TACATGAGGACTGGGGAGGGCTTTCTTTGTGTATTTGCCATAAATAACTAAATCATTTGAAGATATTC  
ACCATTATAGAGAACAAATTAAGAGTAAAGGACTCTGAAGATGTACCTATGGTCTAGTAGGAAATAA  
ATGTGATTTGCCTTCTAGAACAGTAGACACAAAACAGGCTCAGGACTTAGCAAGAAGTTATGGAATTCCT  
TTTATTGAAACATCAGCAAAGACAAGACAGGGTGTGATGATGCCTTCTATACATTAGTTCGAGAAATTC  
GAAAACATAAAGAAAAGATGAGCAAAGATGGTAAAAGAAGAAAAAGAAGTCAAAGACAAAGTGTGTAAT  
TATG

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG201958 representing NM\_004985  
Red=Cloning site Green=Tags(s)

MTEYKLVVVGAGGVGKSALTIQLIQNHFVDEYDPTIEDSYRKQVVIDGETCLLDILDITAGHEEYSAMRDQ  
YMRTGEGFLCVFAINNTKSFEDIHHYREQIKRVKDSSEDPVPMVLVGNKCDLPSRTVDTKQAQDLARSYGIP  
FIETSAKTRQGVDDAFYTLVREIRKHKEKMSKDGKSKKSKTKCVIM

**TRTRPLE** - GFP Tag - V

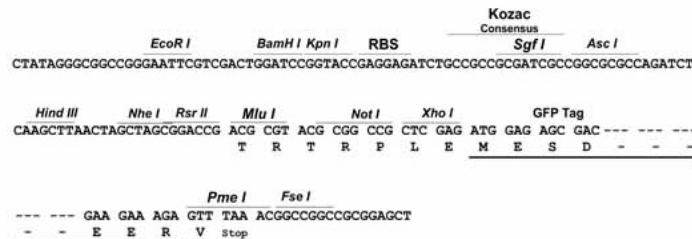


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Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



ACCN: NM\_004985

ORF Size: 564 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).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
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.

RefSeq: [NM\\_004985.3](#), [NP\\_004976.2](#)

RefSeq Size: 5312 bp

RefSeq ORF: 567 bp

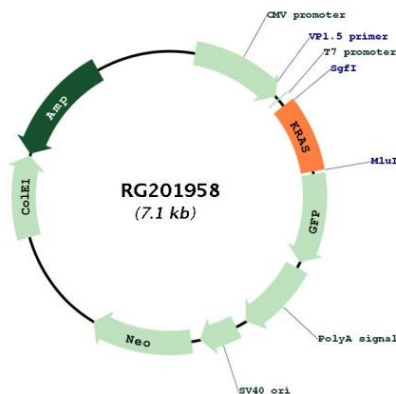
Locus ID: 3845

UniProt ID: [P01116](#)

<b>Cytogenetics:</b>	12p12.1
<b>Domains:</b>	ras, RAS, RHO, RAB
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	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]

**Product images:**



Circular map for RG201958