

## Product datasheet for **RC225202**

### p21 Ras (HRAS) (NM\_001130442) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** p21 Ras (HRAS) (NM\_001130442) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** p21 Ras  
**Synonyms:** C-BAS/HAS; C-H-RAS; C-HA-RAS1; CTLO; H-RASIDX; HAMS; HRAS1; p21ras; RASH1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC225202 representing NM\_001130442  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGACGGAATATAAGCTGGTGGTGGTGGGCGCCGGTGTGGGCAAGAGTGGCTGACCATCCAGCTGA  
 TCCAGAACCATTTGTGGACGAATACGACCCACTATAGAGGATTCCTACCGAAGCAGGTGGTCATTGA  
 TGGGGAGACGTGCCTGTTGGACATCCTGGATACCGCCGGCAGGAGGAGTACAGCGCCATGCGGGACCAG  
 TACATGCGCACCGGGGAGGGCTTCTGTGTGTGTTGCCATCAACAACACCAAGTCTTTGAGGACATCC  
 ACCAGTACAGGGAGCAGATCAAACGGGTGAAGGACTCGGATGACGTGCCATGGTCTGGTGGGGAACAA  
 GTGTGACCTGGCTGCACGCACTGTGGAATCTCGGCAGGCTCAGGACCTCGTCCGAAGCTACGGCATCCCC  
 TACATCGAGACCTCGGCCAAGACCCGGCAGGGAGTGGAGGATGCCTTCTACACGTTGGTGCCTGAGATCC  
 GGCAGCACAAGCTGCGGAAGCTGAACCTCCTGATGAGAGTGGCCCCGGTGCATGAGCTGCAAGTGTGT  
 GCTCTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC225202 representing NM\_001130442  
 Red=Cloning site Green=Tags(s)

MTEYKLVVVGAGGVGKSALTIQLIQNHFVDEYDPTIEDSYRKQVVIDGETCLLDILDITAGQEEYSAMRDQ  
 YMRTGEGFLCVFAINNTKSFEDIHQYREIQIKRVKDSDDVPMVLVGNKCDLAARTVESRQAQDLVRSYGIP  
 YIETSAKTRQGVEDAFYTLVREIRQHKLRKLNPPDESGPGCMSCCKVLS

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

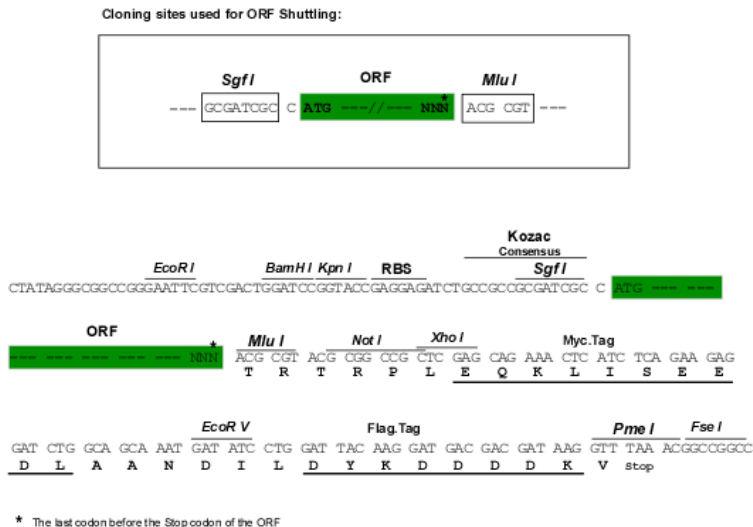


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Chromatograms: [https://cdn.origene.com/chromatograms/mk6048\\_a08.zip](https://cdn.origene.com/chromatograms/mk6048_a08.zip)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_001130442

ORF Size: 567 bp

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).

**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\\_001130442.2](#), [NP\\_001123914.1](#)

**RefSeq ORF:** 570 bp

**Locus ID:** 3265

**UniProt ID:** [P01112](#)

**Cytogenetics:** 11p15.5

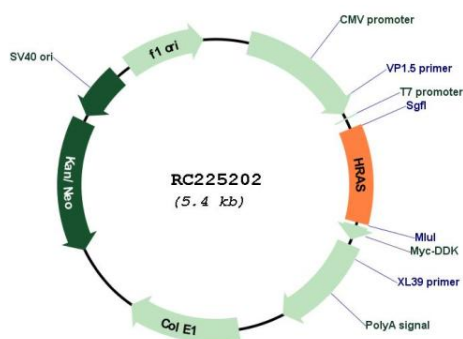
**Protein Families:** Druggable Genome

**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

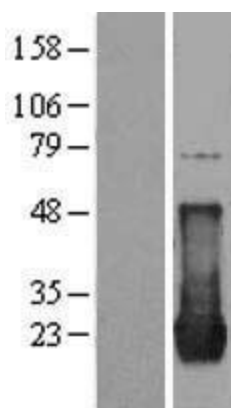
**MW:** 21.1 kDa

**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 re-palmitoylation, 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]

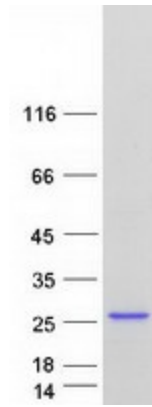
Product images:



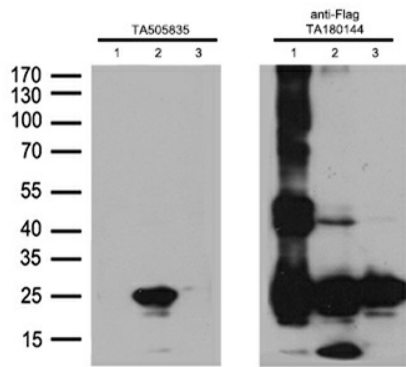
Circular map for RC225202



Western blot validation of overexpression lysate (Cat# [LY427210]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC225202 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified HRAS protein (Cat# [TP325202]). The protein was produced from HEK293T cells transfected with HRAS cDNA clone (Cat# RC225202) using MegaTran 2.0 (Cat# [TT210002]).



Western blot analysis of anti-NRAS monoclonal antibody, TA505835.  
Incubation: 1:500, 1h.  
1: lysate of 293T transfected with HRAS plasmid, RC225202  
2: lysate of 293T transfected with NRAS plasmid, RC202681  
3: lysate of 293T transfected with KRAS plasmid, RC222697

HEK293T cells were transfected with the 3 different overexpression plasmids (1:HRAS, Cat# RC225202; 2: NRAS, Cat# [RC202681]; 3:KRAS, Cat# [RC222697]) for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-flag antibody (Cat# [TA180144], 1:1000) or anti-NRAS mouse monoclonal antibody (Cat# [TA505835], 1:500).