

Product datasheet for **RC403318**

RET (NM_020975) Human Mutant ORF Clone

Product data:

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|---------------------------|---|
| Product Type: | Mutant ORF Clones |
| Product Name: | RET (NM_020975) Human Mutant ORF Clone |
| Mutation Description: | R694Q |
| Affected Codon#: | 694 |
| Affected NT#: | 2081 |
| Nucleotide Mutation: | RET Mutant (R694Q), Myc-DDK-tagged ORF clone of Homo sapiens ret proto-oncogene (RET), transcript variant 2 as transfection-ready DNA |
| Effect: | Hirschsprung disease |
| Symbol: | RET |
| Synonyms: | CDHF12; CDHR16; HSCR1; MEN2A; MEN2B; MTC1; PTC; RET-ELE1 |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| Tag: | Myc-DDK |
| ACCN: | NM_020975 |
| ORF Size: | 3342 bp |
| Restriction Sites: | SgfI-MluI |
| ORF Nucleotide Sequence: | >RC403318 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s) |

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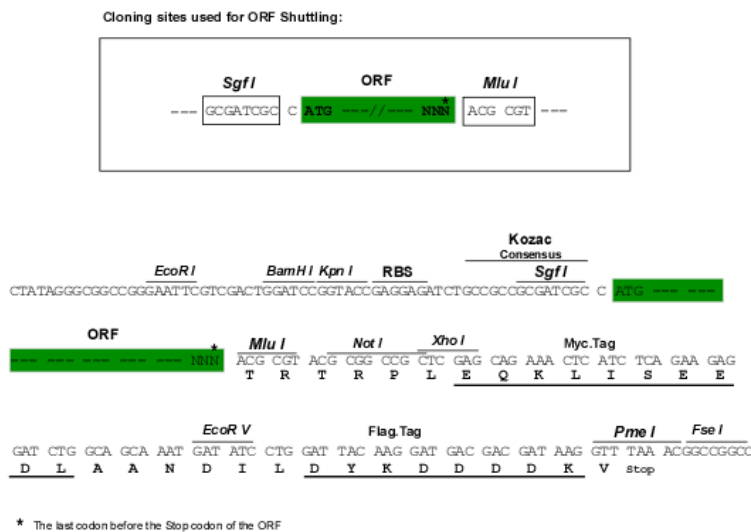
Protein Sequence: >RC403318 representing NM_020975
Red=Cloning site Green=Tags(s)

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E N Q V S V D A F K I L E D P K W E F P R K N L V L G K T L G E G E F G K V V K A T A F H L K G R A G Y T T V A V K M L K E N A S P S E L R
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A L P S T W I E N K L Y G M S D P N W P G E S P V P L T R A D G T N T G F P R Y P N D S V Y A N W M L S P S A A K L M D T F D S
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SGPTRRRLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



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.

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| 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_066124 |
| RefSeq Size: | 3342 bp |
| RefSeq ORF: | 3345 bp |
| Locus ID: | 5979 |
| Cytogenetics: | 10q11.21 |
| Protein Families: | Druggable Genome, Protein Kinase, Transmembrane |
| Protein Pathways: | Endocytosis, Pathways in cancer, Thyroid cancer |
| MW: | 122.5 kDa |
| Gene Summary: | This gene encodes a transmembrane receptor and member of the tyrosine protein kinase family of proteins. Binding of ligands such as GDNF (glial cell-line derived neurotrophic factor) and other related proteins to the encoded receptor stimulates receptor dimerization and activation of downstream signaling pathways that play a role in cell differentiation, growth, migration and survival. The encoded receptor is important in development of the nervous system, and the development of organs and tissues derived from the neural crest. This proto-oncogene can undergo oncogenic activation through both cytogenetic rearrangement and activating point mutations. Mutations in this gene are associated with Hirschsprung disease and central hypoventilation syndrome and have been identified in patients with renal agenesis. [provided by RefSeq, Sep 2017] |