

Product datasheet for **RC403293**

RET (NM_020975) Human Mutant ORF Clone

Product data:

Product Type:	Mutant ORF Clones
Product Name:	RET (NM_020975) Human Mutant ORF Clone
Mutation Description:	C618X
Affected Codon#:	618
Affected NT#:	1854
Nucleotide Mutation:	RET Mutant (C618X), Myc-DDK-tagged ORF clone of Homo sapiens ret proto-oncogene (RET), transcript variant 2 as transfection-ready DNA
Effect:	Multiple endocrine neoplasia 2
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:	1851 bp
Restriction Sites:	Sgfl-Mlul



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ORF Nucleotide Sequence:

>RC403293 representing NM_020975
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCCGCTGCTAGGCA
 AAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGCCGG
 CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCCTGGGCCAG
 CATCTCTACGGCAGTACCGCACACGGCTGCATGAGAACAAGTGGATCTGCATCCAGGAGGACACCGGCC
 TCCTCTACCTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
 CCTGCTCACCGTCTACCTCAAGGTCTTCTGTACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
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 GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCGTGTCTTCGATGCAGACGTGG
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 GCTGCCCTGTCTGTGCAGTCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGGCTGGGCTCCCC
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 AGCACCAAGACCTGCCCGACGCGCCACTGCGATGTTGTGGAGACCAAGACATCAACATTTGCCCTCAGG
 ACTGCCTCCGGGGCAGCATTGTTGGGGACACGAGCCTGGGGAGCCCCGGGGATTAAAGCTGGCTATGG
 CACTGCAACTGCTTCCCTGAGGAGGAGAAG

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence:

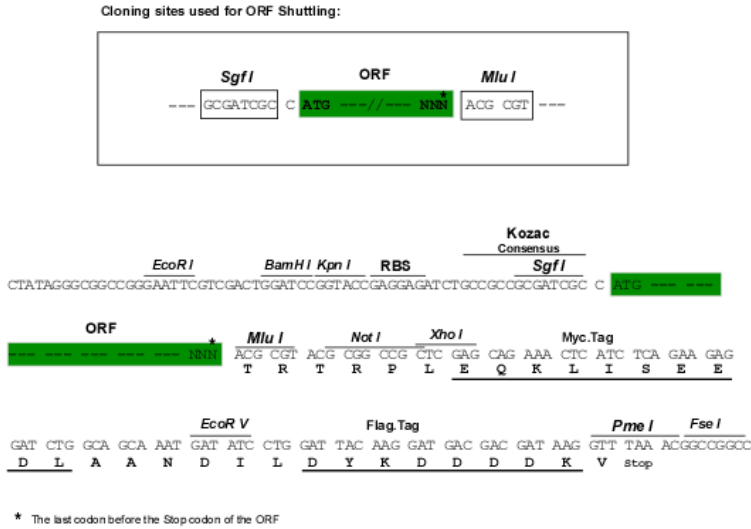
>RC403293 representing NM_020975
 Red=Cloning site Green=Tags(s)

MAKATSGAAGLRLLLLLLLLPLLGKVALGLYFSRDAYWEKLYVDQAAGTPLL YVHALRDAPEEVPFRLGQ
 HLYGTYRTRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLL TVYLVKVFLLSPTSLREGECQWP
 GEARVYVYFNTSFPACSSLPRELCPETRPSFRIRENRPPGTFHQFRLLPVQFLCPNISVAYRLLLEGE
 GLPFRCAPDSLEVSTRWALDREQREKVELVAVCTVHAGAREEVVMVFPVTVYDEDDSAFTFPAGVDTAS
 AVVEFKRKEDTVVATLRVFDADVVPASGELVRRYTSTLLPGDTWAQQTFRVEHWPNETSVQANGSFVRAT
 VHDYRLVLNRNLSISENRTMQLAVLVNDSDFQPGAGVLLLHFNVSVLPVSLHLPSTYSLSVSRARRRFA
 QIGKVCVENCQAFSGINVQYKLVHSSGANSTLGVVTS AEDTSGILFVNDTKALRRPKCAELHYMVVATDQ
 QTSRQAQQLLVTEGSYVAEEAGCPLSCAVSKRRLECEECGGLGSPTRCEWRQGDGKGITRNFSTCSP
 STKTCPDGHCDVVETQDINICPQDCLRGSIVGGHEPGEPRGIKAGYGTNCNFPEEEK

SGP**TRRRLEQKLI**SEEDLAANDILDYKDDDDKV

Restriction Sites: Sgfl-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.

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:

1851 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:	67.9 kDa
Gene Summary:	<p>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]</p>