

Product datasheet for **RC403311**

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:	A641S
Affected Codon#:	641
Affected NT#:	1921
Nucleotide Mutation:	RET Mutant (A641S), Myc-DDK-tagged ORF clone of Homo sapiens ret proto-oncogene (RET), transcript variant 2 as transfection-ready DNA
Effect:	Multiple endocrine neoplasia 2A
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:	>RC403311 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**GCGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCCGCTGCTAGGCA
AAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGGCCGG
CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGCCAG
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAAGTGGATCTGCATCCAGGAGGACACCGGCC
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGAACCGCGGCTTTCC
CCTGCTACCGTCTACCTCAAGGTCTTCTGTACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGCTCCCTCAAGCCCCGGG



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AGCTCTGCTTCCCAGAGACAAGGCCCTCCTCCGCATTCCGGAGAACCGACCCCCAGGCACCTTCCACCA
GTTCCGCCTGCTGCCTGTGCAGTTCTTGTGCCCAACATCAGCGTGGCCTACAGGCTCCTGGAGGGTGA
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TAACTGGATGCTTTCACCTCAGCGGCAAAATTAATGGACACGTTTGATAGT

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

Protein Sequence: >RC403311 representing NM_020975
 Red=Cloning site Green=Tags(s)

MAKATSGAAGRLRLLLLLLLPLLKGVALGLYFSRDAYWEKLYVDQAAGTPLLYVHALRDAPEEVPSFRLGQ
 HLYGTYRTRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLLTVYLVKVFVLSLREGECQWP
 GCARVYF SFFNTSFPACSSLKPRELFCFPETRPSFRIRENRPPGTFHQFRLLPVQFLCPNISVAYRLLGE
 GLPFRCAPDSLEVSTRWALDREQREKVELVAVCTVHAGAREEVVMVFPVTVYDEDDSAFTFPAGVDTAS
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 VHDYRLVLNRNLSISENRTMQLAVLVNDSDFQGGAGVLLLHFNVSVLVSLHLPSTYSLSVSRARRFA
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 QTSRQAQAQLLVTVEGSYVAEEAGCPLSCAVSKRRLCECECGGLGSPTRCEWRQGDGKGITRNFSTCSP
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 DELCRTVIAASVLF SFI VSVLLSAFCIHCHYKFAHKPPISSAEMTFRRPAQAFVSYSSSGARRPSLDSM
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 PDERALTMGDLISFAWQISQGMQYLAEMKLVHRDLAARNILVAEGRKMKISDFGLSRDVEEDSYVKRSQ
 GRIPVKWMAIESLFDHIYTTQSDVWVSGVLLWEIVTLGGNPYPGIPPERLFNLLKTGHRMERPDCSEEM
 YRLMLQCWKQEPDKRPVFADISKDLEKMMVKRRDYLDLAASTPSDSL IYDDGLSEEETPLVDCNNAPLPR
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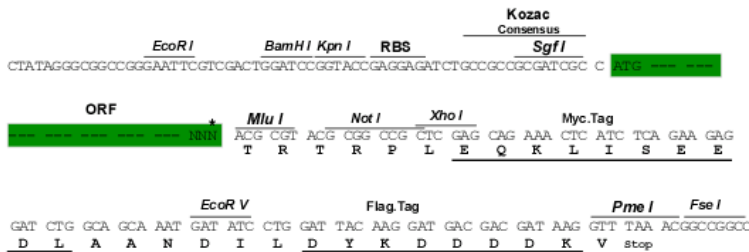
SGPTRRRLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfi-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



* 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_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]