

## Product datasheet for **RC403250**

### 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:	G321R
Affected Codon#:	321
Affected NT#:	961
Nucleotide Mutation:	RET Mutant (G321R), Myc-DDK-tagged ORF clone of Homo sapiens ret proto-oncogene (RET), transcript variant 2 as transfection-ready DNA
Effect:	Thyroid carcinoma, medullary
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:	>RC403250 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCCGCTGCTAGGCA  
AAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGGCCGG  
CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGCCAG  
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAAGTGGATCTGCATCCAGGAGGACACCGGCC  
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC  
CCTGCTACCGTCTACCTCAAGGTCTTCTGTACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA  
GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGCTCCCTCAAGCCCCGGG



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AGCTCTGCTTCCCAGAGACAAGGCCCTCCTCCGCATTCCGGAGAACCGACCCCCAGGCACCTTCCACCA  
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GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCTCCCAGGGACACCTGGGCCAGCA  
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GACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTCCAGGCCAACGGCAGCTTCGTGCGGGCGACC  
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GCTGCCGGTACGCTGCACCTGCCAGTACCTACTCCCTCTCCGTGAGCAGGAGGGCTCGCCGATTTGCC  
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CCTCTGGTGCCAACTGCAGCACGCTAGGGTGGTACCTCAGCCGAGGACACCTCGGGATCCTGTTTGT  
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GCTGCCCCCTGCTCTGTGAGTACGCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGGCCCTGGGCTCCCC  
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CGAGAGCCGAAAAGTGGGGCTGGCTACCTGGGAGTGGAGGCAGCCGCAACTCCAGCTCCCTGGACCAC  
CCGGATGAGCGGGCCCTCACCATGGGCGACCTCATCTCATTTCCTGGCAGATCTCACAGGGATGCAGT  
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TATGGTCTTTGGTGTCTGCTGTGGGAGATCGTGACCCTAGGGGGAAACCCCTATCCTGGGATTCCTCC  
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GATTTATGACGACGGCCTCTCAGAGGAGGAGACACCGCTGGTGGACTGTAAATGCCCCCTCCCTCGA  
GCCCTCCCTTCCACATGGATTGAAAACAACTCTATGGCATGTCAGACCCGAACCTGGCCGGAGAGATG  
CTGTACCACTCAGAGAGCTGATGGCACTAACACTGGGTTTCCAAGATATCCAATGATAGTGTATATGC  
TAACTGGATGCTTTCACCTCAGCGGCAAAATTAATGGACACGTTTGATAGT

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
TGGATTACAAGGATGACGACGA TAAGGTTTAA



<b>Components:</b>	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).
<b>RefSeq:</b>	<a href="#">NP_066124</a>
<b>RefSeq Size:</b>	3342 bp
<b>RefSeq ORF:</b>	3345 bp
<b>Locus ID:</b>	5979
<b>Cytogenetics:</b>	10q11.21
<b>Protein Families:</b>	Druggable Genome, Protein Kinase, Transmembrane
<b>Protein Pathways:</b>	Endocytosis, Pathways in cancer, Thyroid cancer
<b>MW:</b>	122.5 kDa
<b>Gene Summary:</b>	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]