

Product datasheet for **RC403272**

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:	C541X
Affected Codon#:	541
Affected NT#:	1623
Nucleotide Mutation:	RET Mutant (C541X), 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:	1620 bp
Restriction Sites:	Sgfl-Mlul



[View online »](#)

ORF Nucleotide Sequence:

>RC403272 representing NM_020975
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCCGCTGCTAGGCA
 AAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGCCGG
 CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCCCTGGGCCAG
 CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAAGTGGATCTGCATCCAGGAGGACACCGGCC
 TCCTCTACCTTAACGGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
 CCTGCTCACCGTCTACCTCAAGGTCTTCTGTACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
 GGCTGTGCCCGCTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGTCCCTCAAGCCCCGGG
 AGCTCTGCTTCCAGAGACAAGGCCCTCCTTCCGATTCCGGGAGAACCGACCCCCAGGCACCTTCCACCA
 GTTCCGCCCTGCTGCCTGTGCAGTCTTGTGCCCAACATCAGCGTGGCCTACAGGCTCCTGGAGGGTGAG
 GGTCTGCCCTTCCGCTGCGCCCCGACAGCCTGGAGGTGAGCACGCGCTGGGCCCTGGACCGCGAGCAGC
 GGGAGAAGTACGAGCTGGTGGCCGTGTGCACCGTGCACGCCGGCGCGCGAGGAGGTGGTGATGGTGCC
 CTTCCCGGTGACCGTGTACGACGAGGACGACTCGGCGCCACCTTCCCGCGGGCGTGCACACCGCCAGC
 GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCGTGTCTTCGATGCAGACGTGG
 TACCTGCATCAGGGGAGCTGGTGGGCGGTACACAAGCACGCTGCTCCCCGGGGACACCTGGGCCAGCA
 GACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTCCAGGCAACGGCAGCTTCGTGCGGGCGACC
 GTACATGACTATAGCTGGTTCTCAACCGGAACCTCTCCATCTCGGAGAACCACCATCAGCAGTGGCGG
 TGCTGGTCAATGACTCAGACTTCCAGGGCCAGGAGCGGGCGTCTCTTGGCTCCACTTCAACGTGCGGT
 GCTGCCGGTCAAGCTGCACCTGCCAGTACTACTCCCTCTCCGTGAGCAGGAGGCTCGCCGATTTGCC
 CAGATCGGAAAAGTCTGTGTGGA AAAACTGCCAGGCATTAGTGGCATCAACGTCCAGTACAAGCTGCATT
 CCTCTGGTGCCAACTGCAGCACGCTAGGGGTGGTACCTCAGCCGAGGACACCTCGGGGATCCTGTTTGT
 GAATGACACCAAGGCCCTGCGGCGGCCAAGTGTGCCGAACCTCACTACATGGTGGTGGCCACCGACCAG
 CAGACCTTAGGCAGGCCAGGCCAGCTGCTTGTAAAGTGGAGGGTGCATATGTGGCCGAGGAGGCGG
 GCTGCCCCCTGTCTGTGCAGTCAGCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGCCTGGGCTCCCC
 AACAGGCAGG

AG**CGGACCG**ACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGA **TAAGTTTAA**

Protein Sequence:

>RC403272 representing NM_020975
 Red=Cloning site Green=Tags(s)

MAKATSGAAGLRLLLLLLLLPLLGKVALGLYFSRDAYWEKLYVDQAAGTPLLIVHALRDAPEEVPFRLGQ
 HLYGTYRTRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLLTVYLVKVFLLSPTSLREGECQWP
 GCARVYF SFFNTSFPACSSLKPRELCPETRPSFRIRENRPPGTFHQFRLLPVQFLCPNISVAYRLLGE
 GLPFRCAPDSLEVSTRWALDREQREKYELVAVCTVHAGAREEVVMPFPVTVYDEDDSAFTFPAGVDTAS
 AVVEFKRKEDTVVATLRVFDADVVPASGELVRRYTSTLLPGDTWAQTFRVEHWPNETSVQANGSFVRAT
 VHDYRLVLNRNLSISENRTMQLAVLVNDSDFQPGAGVLLLFHNVSVLPVSLHLPSTYSLSVSRARRRFA
 QIGKVCVENCQAFSGINVQYKLHSSGANCSLGVVTS AEDTSGILFVNDTKALRRPKCAELHYMVVATDQ
 QTSRQAQAQLLVTVEGSYVAEEAGCPLSCAVSKRRLECEECGGLGSPTR

SGPTRRRLEQKLI**SEEDLAANDILDYKDDDDKV**

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.

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:

1620 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:	59.4 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>