

Product datasheet for **RC403375**

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:	R982C
Affected Codon#:	982
Affected NT#:	2944
Nucleotide Mutation:	RET Mutant (R982C), Myc-DDK-tagged ORF clone of Homo sapiens ret proto-oncogene (RET), transcript variant 2 as transfection-ready DNA
Effect:	Autonomic control, congenital failure of ?
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:	>RC403375 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGCTGCGTCTGCTGTTGCTGCTGCTGCCGCTGCTAGGCA
AAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGGCCGG
CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGCCAG
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAAGTGGATCTGCATCCAGGAGGACACCGGCC
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
CCTGCTACCGTCTACCTCAAGGTCTTCTGTACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGCTCCCTCAAGCCCCGGG



[View online »](#)

AGCTCTGCTTCCCAGAGACAAGGCCCTCCTCCGCATTGGGAGAACCGACCCCCAGGCACCTTCCACCA
GTTCCGCCTGCTGCCTGTGCAGTTCTTGTGCCCAACATCAGCGTGGCCTACAGGCTCCTGGAGGGTGG
GGTCTGCCCTTCCGCTGCGCCCCGGACAGCCTGGAGGTGAGCACGCGCTGGGCCCTGGACCGGAGCAGC
GGGAGAAGTACGAGCTGGTGGCCGTGTGACCCGTGCACGCCGGCGCGCGGAGGAGTGGTATGGTGCC
CTTCCCGGTGACCGTGTACGACGAGGACGACTCGGCCCCACCTTCCCGCGGGCGTGCACACCGCCAGC
GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCTCCCGGGGACACCTGGGCCAGCA
TACCTGCATCAGGGGAGCTGGTGGCCGTTACACAAGCAGCCTGCTCCCGGGGACACCTGGGCCAGCA
GACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTCCAGGCCAACGGCAGCTTCGTGCGGGCGACC
GTACATGACTATAGGCTGGTTCTCAACCGGAACCTCTCCATCTCGGAGAACCGCACCATGCACTGGCGG
TGCTGGTCAATGACTCAGACTTCCAGGGCCAGGAGCGGGCGTCTCTTGTCCACTTCAACGTGTCCGT
GCTGCCGGTACGCTGCACCTGCCAGTACCTACTCCCTCTCCGTGAGCAGGAGGGCTCGCCGATTTGCC
CAGATCGGAAAGTCTGTGTGAAAAGTCCAGGCATTAGTGGCATCAACGTCCAGTACAAGCTGCATT
CCTCTGGTGCCAACTGCAGCACGCTAGGGTGGTACCTCAGCCGAGGACACCTCGGGATCCTGTTTGT
GAATGACACCAAGGCCCTGCGGGGCCAAGTGTGCCAACTTACTACATGGTGGTGGCCACCGACCAG
CAGACCTTAGGCAGGCCAGGCCAGCTGCTTGAACAGTGGAGGGTCAATATGTGGCCGAGGAGCGG
GCTGCCCCCTGTCTGTGCACTCAGCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGGCCTGGGCTCCCC
AACAGGCAGGTGTGAGTGGAGGCAAGGAGATGGCAAAGGGATCACAGGAACTTCTCACCTGCTCTCCC
AGCACCAAGACCTGCCCGACGGCCACTGCGATGTTGTGGAGACCAAGACATCAACATTTGCCCTCAGG
ACTGCCTCCGGGCGACATTGTTGGGGACACGAGCCTGGGGAGCCCCGGGGATTAAAGCTGGCTATGG
CACCTGCAACTGCTTCCCTGAGGAGGAGAAGTCTTCTGCGAGCCGAAGACATCCAGGATCCACTGTGC
GACGAGCTGTGCCGACGGTGTGCGAGCCGTGCTCTTCTCCTTATCGTCTCGGTGCTGCTGTCTG
CCTTCTGCATCCACTGCTACCACAAGTTTCCCAAGCCACCCATCTCCTCAGCTGAGATGACCTCCG
GAGGCCCGCCAGGCCCTCCCGGTGAGTACTCTTCCGGTGGCCCGCCGCTCGTGGATCCATG
GAGAACCAGGTCTCCGTGGATGCTTCAAGATCCTGGAGGATCCAAAGTGGGAATTCCTCGGAAGAACT
TGGTTCTTGGAAAAGTCTAGGAGAAGGCAATTTGAAAAGTGGTCAAGGCAACGGCCTTCCATCTGAA
AGGCAGAGCAGGGTACACCACGGTGGCCGTGAAGATGCTGAAAGAGAACGCCTCCCCGAGTGAAGTTCGA
GACCTGCTGTGAGTTCACAGTCTGAAGCAGGTCAACCACCCACATGTATCAAAATGATGGGGCT
GCAGCCAGGATGGCCCGCTCCTCCTATCGTGGAGTACGCCAAATACGGCTCCCTGCGGGGCTTCTCCG
CGAGAGCCGAAAAGTGGGGCTGGCTACCTGGGAGTGGAGGCAGCCGCAACTCCAGCTCCCTGGACCAC
CCGGATGAGCGGGCCCTCACCATGGGCGACCTCATCTCATTGCTGGCAGATCTCACAGGGATGCAGT
ATCTGGCCGAGATGAAGCTCGTTCATCGGGACTTGGCAGCCAGAAACATCCTGGTAGCTGAGGGCGGAA
GATGAAGATTTCCGATTTCCGGCTGTCCCGAGATGTTTATGAAGAGGATTCCTACGTGAAGAGGACCCAG
GGTCGGATTCAGTAAATGGATGGCAATTGAATCCCTTTTTGATCATATCTACACCACGAAAAGTATG
TATGGTCTTTGGTGTCTGCTGTGGGAGATCGTGACCCTAGGGGGAAACCCCTATCCTGGGATTCCTCC
TGAGCGGCTCTTCAACCTTCTGAAGACCGGCCACCGGATGGAGAGGCCAGACAACTGCAGCGAGGAGATG
TACTGCCTGATGCTCAATGCTGGAAGCAGGAGCCGGACAAAAGGCCGGTGTGCGGACATCAGCAAAG
ACCTGGAGAAGATGATGGTTAAGAGGAGAGACTACTTGGACCTTGGCGCTCCACTCCATCTGACTCCCT
GATTTATGACGACGGCCTCTCAGAGGAGGAGACACCGCTGGTGGACTGTAAATGCCCCCTCCCTCGA
GCCCTCCCTTCCACATGGATTGAAAACAACTCTATGGCATGTCAGACCCGAACCTGGCCTGGAGAGATG
CTGTACCACTCAGAGAGCTGATGGCACTAACACTGGGTTTCCAAGATATCCAATGATAGTGTATATGC
TAACTGGATGCTTTCACCTCAGCGGCAAAATTAATGGACACGTTTGTATG

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

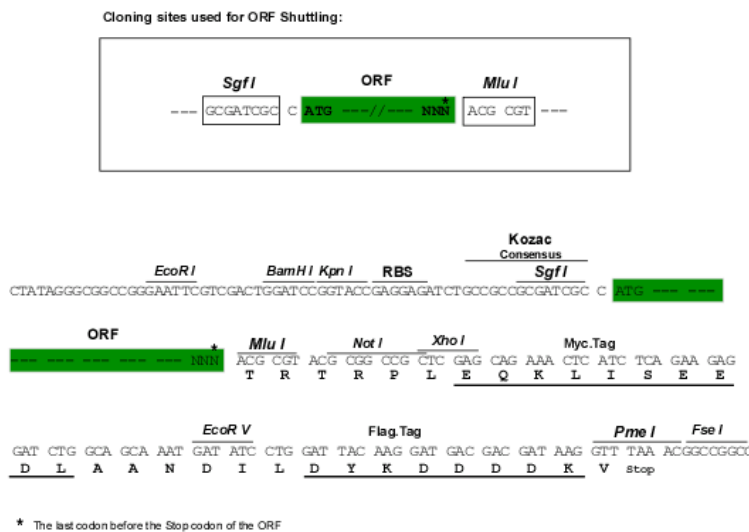
Protein Sequence: >RC403375 representing NM_020975
 Red=Cloning site Green=Tags(s)

```
MAKATSGAAGRLRLLLLLLLPLLKGLYFSRDAYWEKLYVDQAAGTPLLYVHALRDAPEEVPSFRLGQ
HLYGTYRTRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLLTVYLKVFLSPTSLREGECQWP
GCARVYFSSFNTSFPACSSLKPRELCFPETRPSFRIENRPPGTFHQFRLLPVQFLCPNISVAYRLLGE
GLPFRCAPDSLEVSTRWALDREQREKVELVAVCTVHAGAREEVMVPPVTVYDEDDSAFTFPAGVDTAS
AVVEFKRKEDTVVATLRVFDADVPASGELVRRYTSTLLPGDTWAQQTFRVEHWPNETSVQANGSFVRAT
VHDYRLVLRNLSISENRTMQLAVLVNDSDFQGPGAGVLLLHFNVSVLVPSLHLPSTYSLSVSRARRFA
QIGKVCVENCQAFSGINVQYKLHSSGANCSTLGVVTSAEDTSGILFVNDTKALRRPKCAELHYMVVATDQ
QTSRQAQAQLLTVVEGSYVAEEAGCPLSCAVSKRRLCECECGGLGSPTRCEWRQGDGKGITRNFSTCSP
STKTCPDGHCDVETQDINICPDQLRGSIVGGHEPGEPRGIKAGYGTNCNCFPEEEKCFCEPEDIQDPLC
DEL CRTVIAAAVLF SFIVSVLLSAFCIHCYHKFAHKPPISSAEMTFRRPAQAFPVSYSSSGARRPSLDSM
ENQVSVDAFKILEDPKWEPFRKNLVLGKTLGEGEFGKVVKATAFHLKGRAGYTTVAVKMLKENASPSLR
DLLSEFNVLKQVNHPIKLYGACSDQGPLLLIVEYAKYGSLRGFLRESRKVGPGLGSGGSRNSSLDH
PDERALTMGDLISFAWQISQGMQYLAEKMLVHRDLAARNILVAEGRMKISDFGLSRDVEEDSYVKRSQ
GRIPVKWMAIESLFDHIYTTQSDVWVSGVLLWEIVTLGGNYPGIPPERLFNLLKTGHRMERPDNCSEEM
YCLMLQCWKQEPDKRPVFADISKDLEKMMVKRRDYLDLAASTPSDSLIIYDDGLSEEETPLVDCNNAPLR
ALPSTWIENKLYGMSDPNWPGESPVPLTRADGTNTGFPRYPNDSVYANWMLSPSAAKLMDTFDS
```

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:	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]