

Product datasheet for **RG214268**

RET (NM_020975) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RET (NM_020975) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	RET
Synonyms:	CDHF12; CDHR16; HSCR1; MEN2A; MEN2B; MTC1; PTC; RET-ELE1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG214268 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCTGCCGCTGCTAGGCA
AAGTGGCATTGGCCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGGCCG
CACGCCCTTGTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGGCCAG
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAACCTGGATCTGCATCCAGGAGGACACCGGCC
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
CCTGCTCACCGTCTACCTCAAGGTCTTCTGTCAACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGCTCCCTCAAGCCCCGGG
AGCTCTGCTTCCCAGAGACAAGGCCCTCCTTCCGATTCCGGGAGAACCGACCCCCAGGCACCTTCCACCA
GTTCCGCTGTGCTGTGCAAGTCTTGTGCCCAACATCAGCGTGGCCTACAGGCTCCTGGAGGGTGTAG
GGTCTGCCCTTCCGCTGCGCCCCGACAGCCTGGAGGTGAGCACGCGCTGGGCCCTGGACCGGAGCAGC
GGGAGAAGTACGAGCTGGTGGCCGTGTGCACCGTGCACGCCGGCGCGCGGAGGAGGTGGTATGGTGCC
CTTCCCGGTGACCGTGTACGACGAGGACACTCGGCGCCACCTTCCCGCGGGCGTGCACACCGCCAGC
GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCGTGTCTCGATGCAGACGTGG
TACCTGCATCAGGGGAGCTGGTGTAGGCGGTACACAAGCACGCTGCTCCCCGGGGACACTGGGCCAGCA
GACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTCCAGGCCAACGGCAGCTTCGTGCGGGGAC
GTACATGACTATAGGCTGGTTCTCAACCGAACCTCTCCATCTCGGAGAACCGACCATGCAGTGGCGG
TGCTGGTCAATGACTCAGACTTCCAGGGCCAGGAGCGGGCGTCTCTTGTCTCACTTCAACGTGTCGGT
GCTGCCGTCAGCCTGCACCTGCCAGTACCTACTCCCTCTCCGTGAGCAGGAGGGCTCGCCGATTTGCC
CAGATCGGAAAGTCTGTGTGAAAAGTCCAGGCATTAGTGGCATCAACGTCCAGTACAAGCTGCATT
CCTCTGGTGCCAACTGCAGCACGCTAGGGGTGGTCACTCAGCCGAGGACACCTCGGGGATCCTGTTTGT
GAATGACACCAAGGCCCTGCGGCGGCCAAGTGTGCCAACTTACTACATGGTGGTGGCCACCGACCAG



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CAGACCTCTAGGCAGGCCAGGCCAGCTGCTTGTAAACAGTGGAGGGTCATATGTGGCCGAGGAGCGG
 GCTGCCCCCTGTCTGTGCAGTCAGCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGCCTGGGCTCCCC
 AACAGGCAGGTGTGAGTGGAGGCAAGGAGATGGCAAAGGGATCACCAGGAACTTCTCCACCTGCTCTCC
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 GGTCCGATTCAGTTAAATGGATGGCAATTTGAATCCCTTTTTGATCATATCTACACCACGCAAAGTGATG
 TATGGTCTTTGGTGTCTGTGTGGGAGATCGTGACCCTAGGGGAAACCCCTATCCTGGGATTCCTCC
 TGAGCGGCTCTTCAACCTTCTGAAGACCGCCACCGGATGGAGAGGCCAGACAATGCAGCGAGGAGATG
 TACCGCTGATGCTGCAATGCTGGAAGCAGGAGCCGGACAAAAGCCGGTGTTCGGGACATCAGCAAAG
 ACCTGGAGAAGATGATGGTTAAGAGGAGAGACTACTTGACCTTGGCGGCTCCACTCCATCTGACTCCCT
 GATTTATGACGACGGCCCTCAGAGGAGAGACCCGCTGGTGGACTGTAATAATGCCCCCTCCCTCGA
 GCCCTCCCTTCCACATGGATTGAAAACAACTCTATGGCATGTCAGACCCGAACTGGCCTGGAGAGAGTC
 CTGTACCCTCACGAGAGCTGATGGCACTAACCTGGGTTTCCAAGATATCCAAATGATAGTGTATATGC
 TAACTGGATGCTTACCCCTCAGCGGCAAAATTAATGGACACGTTTGATAGT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG214268 representing NM_020975
 Red=Cloning site Green=Tags(s)

MAKATSGAAGRLLLLLLLPLLGKVALGLYFSRDAYWEKLYVDQAAGTPLLYVHALRDAPEEVPFRLGQ
 HLYGTYRTRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLLVYLVKVFSLREGEQWP
 GEARVYVFFNTSFPACSSLPRELCPETRPSFRIRENRPPGFHQFRLLPVQFLCPNISVAYRLLLEGE
 GLPFRCAPDSLEVSTRWALDREQREKYELVAVCTVHAGAREEVVMVFPVTVYDEDDSDPTFPAGVDTAS
 AVVEFKRKEDTVVATLRVFDADVVPASGELVRRYVSTLLPGDTWAQQTFRVEHWPNETSVQANGSFVRAT
 VHRYRLVLRNLSISENRTMQLAVLVNDSDFQPGAGVLLLHFNVSVLPVSLHLPSTYSLSVSRRARRFA
 QIGKVCVENCQAFSGINVQYKLSHSSGANCSTLGVVTS AEDTSGILFVNDTKALRRPKCAELHYMVVATDQ
 QTSRQAQQLLVTEGSYVAEEAGCPLSCAVSKRRLECEECGGLGSPTGRCEWRQGDGKGITRNFSTCSP
 STKTCPDGHCDVETQDINICPQDCLRGSIVGGHEPGEPRGIKAGYGTNCNCFPEEEKCFCEPEDIQDPLC
 DELCRTVIAAAVLFSEFIVSVLLSAFCIHCHYKFAHKPPISSAEMTFRRPAQAFVPSYSSSGARRPSLDSM
 ENQVSVDAFKILEDPKWEFFPRKNLVLGKTLGEGEFKGVVKATAFHLKGRAGYTTVAVKMLKENASPSSEL
 DLLSEFNVLKQVNHPIKLYGACSDGPLLLIVEYAKYGLRGLRESRKGVPGYLGSAGSRNSSSLDH
 PDERALTMGDLISFAWQISQGMQYLAEMKLVHRDLAARNILVAEGRKMKISDFGLSRDVEEDSYVKRSQ
 GRIPVKWMAIESLFDHIYTTQSDVWSFGVLLWEIVTLGGNPPYGPPIPERLFNLLKTGHRMERPDNCSEEM
 YRLMLQCWKQEPDKRPVADISKDLEKMMVKRRDYLDLAASPTSDSLIYDDGLSEETPLVDCNNAPLPR
 ALPSTWIENKLYGMSDPNWPGESPVPLTRADGTNTGFPRYPNDSVYANWMLSPSAAKLMDTFDS

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

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).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	<u>NM_020975.3, NP_066124.1</u>
RefSeq Size:	4757 bp
RefSeq ORF:	3345 bp
Locus ID:	5979
UniProt ID:	<u>P07949</u>
Cytogenetics:	10q11.21
Protein Families:	Druggable Genome, Protein Kinase, Transmembrane
Protein Pathways:	Endocytosis, Pathways in cancer, Thyroid cancer
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]