

Product datasheet for **RG202552**

RET (NM_020630) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RET (NM_020630) 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:	>RG202552 representing NM_020630 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCTGCCGCTGCTAGGCA
AAGTGGCATTGGCCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGGCCGG
CACGCCCTTGTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGGCCAG
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAACCTGGATCTGCATCCAGGAGGACACCGGCC
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
CCTGCTCACCGTCTACCTCAAGGTCTTCTGTCAACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGCTCCCTCAAGCCCCGGG
AGCTCTGCTTCCCAGAGACAAGGCCCTCCTTCCGATTGGGAGAACCGACCCCCAGGCACCTTCCACCA
GTTCCGCTGTGCTGTGCAAGTCTTGTGCCCAACATCAGCGTGGCCTACAGGCTCCTGGAGGGTGTAG
GGTCTGCCCTTCCGCTGCGCCCCGACAGCCTGGAGGTGAGCACGCGCTGGGCCCTGGACCGGAGCAGC
GGGAGAAGTACGAGCTGGTGGCCGTGTGCACCGTGCACGCCGGCGCGCGGAGGAGGTGGTATGGTGCC
CTTCCCGGTGACCGTGTACGACGAGGACACTCGGCGCCACCTTCCCCGCGGGCGTGCACACCGCCAGC
GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCGTGTCTTCGATGCAGACGTGG
TACCTGCATCAGGGGAGCTGGTGTAGGCGGTACACAAGCACGCTGCTCCCCGGGGACACTGGGCCAGCA
GACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTCCAGGCCAACGGCAGCTTCGTGCGGGGACCC
GTACATGACTATAGGCTGGTTCTCAACCGAACCTCTCCATCTCGGAGAACCGACCATGCAGTGGCGG
TGCTGGTCAATGACTCAGACTTCCAGGGCCAGGAGCGGGCGTCTCTTGTCTCACTTCAACGTGTCGGT
GCTGCCGGTACGCTGCACCTGCCAGTACCTACTCCCTCTCCGTGAGCAGGAGGGCTCGCCGATTTGCC
CAGATCGGAAAGTCTGTGTGAAAACCTGCCAGGACCTCAGTGGCATCAACGTCCAGTACAAGCTGCATT
CCTCTGGTGCCAACTGCAGCACGCTAGGGGTGGTCACTCAGCCGAGGACACCTCGGGGATCCTGTTTGT
GAATGACACCAAGGCCCTGCGGCGGCCAAGTGTGCCAACTTACTACATGGTGGTGGCCACCGACCAG



[View online >](#)

CAGACCTCTAGGCAGGCCAGGCCAGCTGCTTGTAAACAGTGGAGGGTCATATGTGGCCGAGGAGGCGG
 GCTGCCCCCTGTCTGTGCAGTCAGCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGCCTGGGCTCCCC
 AACAGGCAGGTGTGAGTGGAGGCAAGGAGATGGCAAAGGATCACCAGGAACTTCTCCACCTGCTCTCCC
 AGCACCAAGACCTGCCCCGACGGCCACTGCGATGTTGTGGAGACCAAGACATCAACATTTGCCCTCAGG
 ACTGCCTCCGGGGCAGCATTGTTGGGGACACGAGCCTGGGGAGCCCCGGGGGATTAAGCTGGCTATGG
 CACCTGCAACTGCTTCCCTGAGGAGGAGAAGTCTTCTGCGAGCCCAAGACATCCAGGATCCACTGTGC
 GACGAGCTGTGCCGCACGGTGATCGCAGCCGCTGCTCTTCTCCTTCATCGTCTCGGTGCTGTCTCG
 CCTTCTGCATCCACTGCTACCACAAGTTTGCCCAAGCCACCCATCTCCTCAGCTGAGATGACCTTCCG
 GAGGCCCGCCAGGCCTTCCCGTCACTACTCCTTCCAGTGCCCGCCGGCCCTCGCTGGACTCCATG
 GAGAACCAGGTCTCCGTGGATGCCTTCAAGATCCTGGAGGATCCAAAGTGGGAATCCCTCGAAGAAGT
 TGGTTCTTGAAAACTCTAGGAGAAGGCAATTTGAAAAAGTGGTCAAGGCAACGGCCTTCCATCTGAA
 AGGCAGAGCAGGGTACACCACGGTGGCCGTGAAGATGCTGAAAGAGAACGCCTCCCCGAGTGAGCTTGA
 GACCTGCTGTGAGAGTCAACGTCCTGAAGCAGGTCAACCACCCACATGTATCAAAATTGTATGGGGCT
 GCAGCCAGGATGGCCGCTCCTCCTCATGTGGAGTACGCCAAAACGGCTCCCTGCGGGGCTTCTCCG
 CGAGAGCCGCAAAGTGGGGCCTGGCTACCTGGGAGTGGAGGCAGCCGCAACTCCAGCTCCCTGGACCAC
 CCGGATGAGCGGGCCCTACCATGGGCGACCTCATCTCATTGCTGGCAGATCTCACAGGGGATGCAAT
 ATCTGGCCGAGATGAAGCTCGTTTATCGGGACTTGGCAGCCAGAAACATCCTGGTAGCTGAGGGGCGGAA
 GATGAAGATTTCCGATTTCCGGCTTGTCCCGAGATGTTTATGAAGAGGATTCGTACGTGAAGAGGACCGAG
 GGTCCGATTCAGTTAAATGGATGGCAATTGAATCCCTTTTTGATCATATCTACACCACGCAAAGTATG
 TATGGTCTTTGGTGTCTGTGTGGGAGATCGTGACCCTAGGGGGAAACCCCTATCCTGGGATTCCTCC
 TGAGCGGCTCTTCAACCTTCTGAAGACCGCCACCGGATGGAGAGGCCAGACAACTGCAGCGAGGAGATG
 TACTGCCTGATGCTGCAATGCTGGAAGCAGGAGCCGACAAAAGCCGGTGTTCGCGACATCAGCAAAG
 ACCTGGAGAAGATGATGGTTAAGAGGAGAGACTACTTGACCTTGGCGGCTCCACTCCATGACTCACT
 GATTTATGACGACGGCCCTCAGAGGAGAGACCCGCTGGTGGACTGTAATAATGCCCCCTCCCTCGA
 GCCTCCCTTCCATGGATTGAAAACAACTCTATGGTGAATTTCCCATGCATTTACTAGATT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG202552 representing NM_020630
 Red=Cloning site Green=Tags(s)

MAKATSGAAGRLLLLLLLPLLGKVALGLYFSRDAYWEKLYVDQAAGTPLLIVHALRDAPEEVPFRLGQ
 HLYGYTRRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLLVYLVKVFSLPTSLREGECQWP
 GCARVYVFFNTSFPACSSSLKPRELCPETRPSFRIRENRPPGTFHQFRLLPVQFLCPNISVAYRLLGE
 GLPFRCAPDSLEVSTRWALDREQREKYELVAVCTVHAGAREEVVMVFPVTVYDEDDSAPTFPAGVDTAS
 AVVEFKRKEDTVVATLRVFDADVVPASGELVRRYTSTLLPGDTWAQOTFRVEHWPNETSVQANGSFVRAT
 VHDYRLVLRNRLSISENRTMQLAVLVNDSDFQGGAGVLLLFHNVSVLPVSLHLPSTYSLSVSRARRFA
 QIGKVCVENCQAFSGINQYKLSHSGANCSTLGVVTS AEDTSGILFVNDTKALRRPKCAELHYMVVATDQ
 QTSRQAQAQLLVTEGSYVAEEAGCPLSCAVSKRRLECEECGGLGSPTRCEWRQDQDKGITRNFSTCSP
 STKTCPDGHCDVVETQDINICPQDCLRGSIVGGHEPGEPRGIKAGYGTNCNCFPEEEKCFCEPEDIQDPLC
 DELCRTVIAAAVLFSEFIVSVLLSAFCIHCHYKFAHKPPISSAEMTFRPAQAFVSYSSSARRPSLDSM
 ENQVSDVAFKILEDPKWEFPRKNLVLGKTLGEGEFKGVKATAFHLKGRAGYTTVAVKMLKENASPSERL
 DLLSEFNVLKQVNHPIKLYGACSDGPLLLIVEYAKYGLRGLRESRKGPGYLGSGGSRNSSSLDH
 PDERALTMGDLISFAWQISQGMQYLAEMKLVHRDLAARNILVAEGRKMKISDFGLSRDVEEDSYVKRSQ
 GRIPVKWMAIESLFDHIYTTQSDVWVSGVLLWEIVTLGGNPYPGIPPERLFNLLKTGHRMERPDNCSEEM
 YCLMLQCWKQEPDKRPVFAADISKDLEKMMVKRRDYLDLAASTPSDSL IYDDGLSEEETPLVDCNNAFLPR
 ALPSTWIENKLYGRISHAFTRF

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_020630

ORF Size: 3216 bp

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).

Reconstitution Method:

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: [NM_020630.4](#), [NP_065681.1](#)

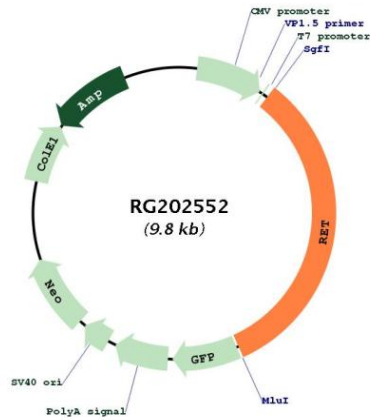
RefSeq Size: 4174 bp

RefSeq ORF: 3219 bp

Locus ID: 5979

UniProt ID: [P07949](#)
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]

Product images:



Circular map for RG202552