

## Product datasheet for **SC309554**

### RET (NM\_020975) Human Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** RET (NM\_020975) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** RET  
**Synonyms:** CDHF12; CDHR16; HSCR1; MEN2A; MEN2B; MTC1; PTC; RET-ELE1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC (PS100020)  
**E. coli Selection:** Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_020975 edited  
 CCGAAGCAGGGCGCGCAGCAGCGCTGAGTGCCCCGGAACGTGCGTCGCGCCCCCAGTGTC  
 CGTCGCGTCCGCCGCGCCCCGGGGATGGGGCGGCCAGACTGAGCGCCGACCCGCC  
 ATCCAGACCCCGCGCCCTAGCCGAGTCCCTCCAGCCGTGGCCCCAGCGCGCACGGGCG  
 ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCCG  
 CTGCTAGGCAAAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTG  
 TATGTGGACCAGGCGCCGGCAGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCT  
 GAGGAGGTGCCAGCTTCCGCTGGGCCAGCATCTCTACGGCACGTACCGCACACGGCTG  
 CATGAGAAACAAGTGGATCTGCATCCAGGAGGACACCGGCCTCTCTACCTAACC GGAGC  
 CTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTCCCTGCTCACC  
 GTCTACCTCAAGGTCTTCTGTGACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA  
 GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTCCAGCCTGCAGCTCCCTC  
 AAGCCCCGGGAGCTCTGCTTCCCAGAGACAAGGCCCTCCTTCCGATTCCGGGAGAACCGA  
 CCCCCAGGCACCTTCCACCAGTTCGGCCTGCTGCCTGTGCAGTCTTGTGCCCAACATC  
 AGCGTGGCCTACAGGCTCCTGGAGGGTGAAGGCTGCCCCTCCGCTGCGCCCCGGACAGC  
 CTGGAGGTGAGCACGCGCTGGGCCCTGGACCGGAGCAGCGGGAGAAGTACGAGCTGGTG  
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 ACCGTGTACGACGAGGACGACTCGGCGCCACCTTCCCCGCGGGCGTGCACACCGCCAGC  
 GCCGTGGTGGAGTTCAAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCGTCTTCGAT  
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 GGGGACACCTGGGCCAGCAGACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTG  
 CAGGCCAACGGCAGCTTTCGTGCGGGCGACCGTACATGACTATAGGCTGGTCTCAACCGG  
 AACCTCTCCATCTCGGAGAACCGCACCATGCAGCTGGCGGTGCTGGTCAATGACTCAGAC  
 TTCCAGGGCCCAGGAGCGGGCGTCTCTTGTCCACTTCAACGTGTCGGTGTGCCGGTGC  
 AGCCTGCACCTGCCAGTACCTACTCCCTCCTCCGTGAGCAGGAGGGCTCGCCGATTTGCC  
 CAGATCGGAAAAGTCTGTGTGAAAAGTCCAGGCATTAGTGGCATCAACGTCCAGTAC  
 AAGCTGCATTCTCTGGTCCAACTGCAGCACGCTAGGGGTGGTACCTCAGCCGAGGAC



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ACCTCGGGGATCCTGTTTGTGAATGACACCAAGGCCCTGCGGCGGCCAAGTGTGCCGAA
CTTCACTACATGGTGGTGGCCACCGACCAGCAGACCTCTAGGCAGGCCAGGCCAGCTG
CTTGTAACAGTGGAGGGGTCAATGTGGCCGAGGAGGCGGGCTGCCCCCTGCTCTGTGCA
GTCAGCAAAGACGGCTGGAGTGTGAGGAGTGTGGCGCCTGGGCTCCCCAACAGGCAGG
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TGCCCTCAGGACTGCCTCCGGGGCAGCATTGTTGGGGGACACGAGCCTGGGGAGCCCCGG
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GAGCCCCAAGACATCCAGGATCCACTGTGCGACGAGCTGTGCCGACGGTGATCGCAGCC
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CACAAGTTTGCCACAAGCCACCCATCTCCTCAGCTGAGATGACCTTCCGGAGGCCCGCC
CAGGCCTTCCCGTCACTACTCCTCTTCCAGTGCCTCCGGCCCTCGTGGACTCCATG
GAGAACCAGGTCTCCGTGGATGCCTTCAAGATCCTGGAGGATCCAAAGTGGGAATCCCT
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GCAACGGCCTTCCATCTGAAAGGCAGAGCAGGGTACACCACGGTGGCCGTGAAGATGCTG
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CTCTATGGCATGTCAGACCCGAACTGGCCTGGAGAGAGTCTGTACCACTCACGAGAGCT
GATGGCACTAACACTGGGTTTCCAAGATATCCAATGATAGTGTATATGCTAACTGGATG
CTTTCACCTCAGCGGCAAAATTAATGGACACGTTTGTAGTTAACATTTCTAGATTGCG
GCCGCGGTGATAGCTGTTTCTGAAACAGATCCCGGGTGGCATCCCTGTGACCCCTCCCA
GTGCT
    
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- Restriction Sites:** Please inquire
- ACCN:** NM\_020975
- Insert Size:** 3600 bp
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** The ORF of this clone has been fully sequenced and found to contain two SNPs compared with NM\_020975.3.
- 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\\_020975.3](#), [NP\\_066124.1](#)

**RefSeq Size:** 5629 bp

**RefSeq ORF:** 3345 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]

Transcript Variant: This variant (2) represents the longer transcript and encodes the longer isoform (a). This isoform is also known as Ret51. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.