

Product datasheet for **RC403236**

RET (NM_020975) Human Mutant ORF Clone

Product data:

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| Product Type: | Mutant ORF Clones |
| Product Name: | RET (NM_020975) Human Mutant ORF Clone |
| Mutation Description: | R180Q |
| Affected Codon#: | 180 |
| Affected NT#: | 539 |
| Nucleotide Mutation: | RET Mutant (R180Q), 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: | 3342 bp |
| Restriction Sites: | SgfI-MluI |
| ORF Nucleotide Sequence: | >RC403236 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGCTGCGTCTGCTGTTGCTGCTGCTGCCGCTGCTAGGCA
AAGTGGCATTGGGCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGCGGCCGG
CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGCCAG
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAACCTGGATCTGCATCCAGGAGGACACCGGCC
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
CCTGCTACCGTCTACCTCAAGGTCTTCTGTACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
GGCTGTGCCCGGTATACTTCTCCTTCTCAACACCTCCTTTCCAGCCTGCAGCTCCCTCAAGCCCCGGG



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AGCTCTGCTTCCCAGAGACAAGGCCCTCCTCCGCATTCCGGGAGAACCAACCCCAAGGCACCTTCCACCA
GTTCCGCCTGCTGCCTGTGCAGTTCTTGTGCCCAACATCAGCGTGGCCTACAGGCTCCTGGAGGGTGG
GGTCTGCCCTTCCGCTGCGCCCCGGACAGCCTGGAGGTGAGCACGCGCTGGGCCCTGGACCGCGAGCAGC
GGGAGAAGTACGAGCTGGTGGCCGTGTGACCCGTGCACGCCGCGCGCGGAGGAGTGGTGATGGTGCC
CTTCCCGGTGACCGTGTACGACGAGGACGACTCGGCGCCACCTTCCCGCGGGCGTGCACACCGCCAGC
GCCGTGGTGGAGTTCAGCGGAAGGAGGACACCGTGGTGGCCACGCTGCTCCCGGGGACACCTGGGCCAGCA
TACCTGCATCAGGGGAGCTGGTGGCCGATACACAAGCAGCCTGCTCCCGGGGACACCTGGGCCAGCA
GACCTTCCGGGTGGAACACTGGCCCAACGAGACCTCGGTCCAGGCCAACGGCAGCTTCGTGCGGGCGACC
GTACATGACTATAGGCTGGTTCTCAACCGGAACCTCTCCATCTCGGAGAACCACCATGACAGCTGGCGG
TGCTGGTCAATGACTCAGACTTCCAGGGCCAGGAGCGGGCGTCTCTTGTCTCACTTCAACGTGTCCGT
GCTGCCGGTACGCTGCACCTGCCAGTACCTACTCCCTCTCCGTGAGCAGGAGGGCTCGCCGATTTGCC
CAGATCGGAAAGTCTGTGTGAAAACCTGCCAGGCATTAGTGGCATCAACGTCCAGTACAAGCTGCATT
CCTCTGGTGCCAACTGCAGCACGCTAGGGTGGTACCTCAGCCGAGGACACCTCGGGATCCTGTTTGT
GAATGACACCAAGGCCCTGCGGCGCCCAAGTGTGCCAACTTACTACATGGTGGTGGCCACCGACCAG
CAGACCTTAGGCAGGCCAGGCCAGCTGCTTGAACAGTGGAGGGTCAATATGTGGCCGAGGAGCGG
GCTGCCCCCTGCTGTGCACTCAGCAAGAGACGGCTGGAGTGTGAGGAGTGTGGCGGCCTGGGCTCCCC
AACAGGCAGGTGTGAGTGGAGGCAAGGAGATGGCAAAGGGATCACAGGAACTTCTCACCTGCTCTCCC
AGCACCAAGACCTGCCCGACGGCCACTGCGATGTTGTGGAGACCAAGACATCAACATTTGCCCTCAGG
ACTGCCTCCGGGCGACATTGTTGGGGACACGAGCCTGGGGAGCCCCGGGGATTAAAGCTGGCTATGG
CACCTGCAACTGCTTCCCTGAGGAGGAGAAGTCTTCTGCGAGCCGAAGACATCCAGGATCCACTGTGC
GACGAGCTGTGCCGACGGTGTGCGAGCCGCTGCTCTTCTCCTTATCGTCTCGGTGCTGCTGTCTG
CCTTCTGCATCCACTGCTACCACAAGTTTCCCAACAAGCCACCATCTCCTCAGCTGAGATGACCTCCG
GAGGCCCGCCAGGCCCTCCCGGTGAGTACTCTCTCCGGTCCCGCCCGCCCTCGTGGACTCCATG
GAGAACCAGGTCTCCGTGGATGCTTCAAGATCCTGGAGGATCCAAAGTGGGAATTCCTCGGAAGAACT
TGGTTCTTGGAAAACCTTAGGAGAAGGCAATTTGAAAAGTGGTCAAGGCAACGGCCTTCCATCTGAA
AGGCAGAGCAGGGTACACCACGGTGGCCGTGAAGATGCTGAAAGAGAACGCCTCCCCGAGTGAGTTCGA
GACCTGCTGTGAGTTCACAGTCTGAAGCAGGTCAACCACCCACATGTGATCAAAATGATGGGGCT
GCAGCCAGGATGGCCCGCTCCTCCTCATCGTGGAGTACGCCAAATACGGCTCCCTGCGGGGCTTCTCCG
CGAGAGCCGAAAAGTGGGGCCTGGCTACCTGGGAGTGGAGGCAGCCGCAACTCCAGCTCCCTGGACCAC
CCGGATGAGCGGGCCCTCACCATGGGCGACCTCATCTCATTGCTGGCAGATCTCACAGGGATGCAGT
ATCTGGCCGAGATGAAGCTCGTTCATCGGGACTTGGCAGCCAGAAACATCCTGGTAGCTGAGGGCGGAA
GATGAAGATTTCCGATTTCCGGCTGTCCCGAGATGTTTATGAAGAGGATTCCTACGTGAAGAGGACCCAG
GGTCGGATTCAGTAAATGGATGGCAATTGAATCCCTTTTTGATCATATCTACACCACGCAAAGTGATG
TATGGTCTTTGGTGTCTGCTGTGGGAGATCGTGACCCTAGGGGGAAACCCCTATCCTGGGATTCCTCC
TGAGCGGCTCTTCAACCTTCTGAAGACCGGCCACCGGATGGAGAGGCCAGACAACTGCAGCGAGGAGATG
TACCGCCTGATGCTGCAATGCTGGAAGCAGGAGCCGGACAAAAGGCCGGTGTGCGGACATCAGCAAAG
ACCTGGAGAAGATGATGGTTAAGAGGAGAGACTACTTGGACCTTGGCGGTCCACTCCATCTGACTCCCT
GATTTATGACGACGGCCTCTCAGAGGAGGAGACACCGCTGGTGGACTGTAAATGCCCCCTCCCTCGA
GCCCTCCCTTCCACATGGATTGAAAACAACTCTATGGCATGTCAGACCCGAACCTGGCCTGGAGAGAGTC
CTGTACCACTCAGAGAGCTGATGGCACTAACACTGGGTTTCCAAGATATCCAATGATAGTGTATATGC
TAACTGGATGCTTTCACCTCAGCGGCAAAATTAATGGACACGTTTGATAGT

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGA TAAGGTTTAA

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| 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] |