

Product datasheet for RC214268

RET (NM_020975) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	RET (NM_020975) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	RET
Synonyms:	CDHF12; CDHR16; HSCR1; MEN2A; MEN2B; MTC1; PTC; RET-ELE1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214268 representing NM_020975 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGAAGGCGACGTCCGGTGCCGCGGGGCTGCGTCTGCTGTTGCTGCTGCTGCTGCCGCTGCTAGGCA
AAGTGGCATTGGCCTCTACTTCTCGAGGGATGCTTACTGGGAGAAGCTGTATGTGGACCAGGCGGCCG
CACGCCCTTGCTGTACGTCCATGCCCTGCGGGACGCCCTGAGGAGGTGCCAGCTTCCGCTGGGCCAG
CATCTCTACGGCACGTACCGCACACGGCTGCATGAGAACAACCTGGATCTGCATCCAGGAGGACACCGGCC
TCCTCTACCTTAACCGGAGCCTGGACCATAGCTCCTGGGAGAAGCTCAGTGTCCGCAACCGCGGCTTTCC
CCTGCTCACCGTCTACCTCAAGGTCTTCTGTCAACCCACATCCCTTCGTGAGGGCGAGTGCCAGTGGCCA
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GGGAGAAGTACGAGCTGGTGGCCGTGTGCACCGTGCACGCCGGCGCGCGGAGGAGGTGGTATGGTGCC
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GAATGACACCAAGGCCCTGCGGCGGCCAAGTGTGCCAACTTACTACATGGTGGTGGCCACCGACCAG



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CAGACCTCTAGGCAGGCCAGGCCAGCTGCTTGTAAACAGTGGAGGGTCATATGTGGCCGAGGAGGCGG
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Protein Sequence:

>RC214268 representing NM_020975
 Red=Cloning site Green=Tags(s)

MAKATSGAAGRLLLLLLLPLLGKVALGLYFSRDAYWEKLYVDQAAGTPLLIVHALRDAPEEVPFRLGQ
 HLYGTYRTRLHENNWICIQEDTGLLYLNRSLDHSSWEKLSVRNRGFPLLVYLVKVFSLPTSLREGEQWP
 GCARVYFSFFNTSFPACSSLPKPRELCPETRPSFRIRENRPPGFHQFRLLPVQFLCPNISVAYRLLLEGE
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 AVVEFKRKEDTVVATLRVFDADVVPASGELVRRYTSTLLPGDTWAQQTFRVEHWPNETSVQANGSFVRAT
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 QIGKVCVENQAFSGINVQYKLHSSGANSTLGVVTSIEDTSGILFVNDKALRRPKCAELHYMVVATDQ
 QTSRQAQAQLLVTEGSYVAEEAGCPLSCAVSKRRLECEECGGLGSPTRCEWRQGDGKGITRNFSTCSP
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 DELCRTVIAAAVLFSEFIVSVLLSAFCIHCHYHKFAHKPPISSAEMTFRPAQAFVSYSSSSARRPSLDSM
 ENQVSVDAFKILEDPKWEFPRKNLVLGKTLGEGEFKGVVKATAFHLKGRAGYTTVAVKMLKENASPSSELR
 DLLSEFNVLKQVNHPHVIKLYGACSDGPLLLIVEYAKYGLRGLRESRKGVPGYLGSGGSRNSSLDH
 PDERALTMGDLISFAWQISQGMQYLAEMKLVHRDLAARNLILVAEGRKMKISDFGLSRDVEEDSYVKRSQ
 GRIPVKWMAIESLFDHIYTTQSDVWSFGVLLWEIVTLGGNYPYGPPIPERLFNLLKTGHRMERPDNCSEEM
 YRLMLQCWKQEPDKRPVFADISKDLEKMMVKRRDYLDLAASTPSDSLIIYDDGLSEETPLVDCNNAPLPR
 ALPSTWIENKLYGMSDPNWPGESPVPLTRADGTNTGFPRYPNDSVYANWMLSPSAAKLMDTFDS

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk8010_e09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_020975

ORF Size: 3342 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_020975.6](#)

RefSeq Size: 5629 bp

RefSeq ORF: 3345 bp
 Locus ID: 5979

UniProt ID: [P07949](#)

Cytogenetics: 10q11.21

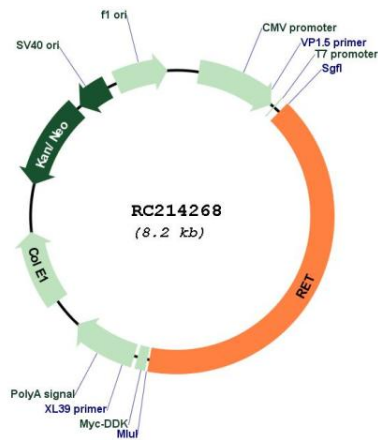
Protein Families: Druggable Genome, Protein Kinase, Transmembrane

Protein Pathways: Endocytosis, Pathways in cancer, Thyroid cancer

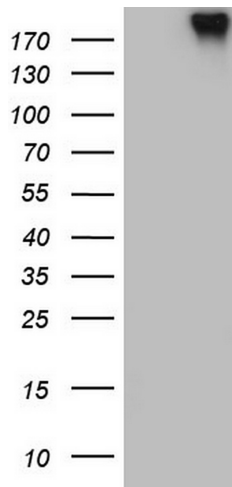
MW: 124.3 kDa

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]

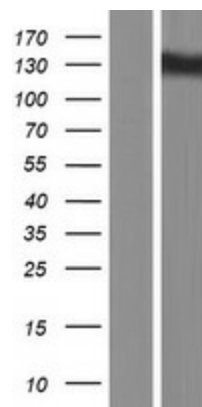
Product images:



Circular map for RC214268



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY RET (Cat# RC214268, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-RET (Cat# [TA805761])(1:500).



Western blot validation of overexpression lysate (Cat# [LY412167]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214268 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).