

Product datasheet for MR211589

Ret (NM_001080780) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Ret (NM_001080780) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Ret
Synonyms:	c-Ret; PTC; RET9; RET51
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR211589 representing NM_001080780 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGAAAGCGACGTCCGGCGCCGAGGGCTGGGGCTGAAGCTGATTTTGCTCCTGCCGCTGCTAGGAG
AAGCCCCACTGGGCTCTATTTCTCAAGGGATGCTTACTGGGAGAGGCTGTATGTAGACCAGCCAGCTGG
CACACCTCTGCTCTATGTCCATGCCCTACGGGATGCCCTGGAGAAGTGCCGAGCTTCCGCTGGGCCAG
CATCTCTATGGCGTCTACCGTACACGGTGCATGAGAATGACTGGATCCGCATCAATGAGACTACTGGCC
TTCTCTACCTCAATCAGAGCCTGGACCACAGTTCTCTGGGAACAGCTCAGCATCCGCAATGGTGGTTTCCC
CCTGCTACCATCTTCTCCAGGTCTTTCTGGGGTCCACAGCCAGAGAGAGGGAGAATGCCATTGGCCA
GGCTGTACCCGTGTACTTCTCCTTCAACGACACCTTCCCAAATTGTAGCTCCTTCAAAGCCAGG
ATCTCTGCATCCCAGAGACAGCCGTGCTCTTCCGAGTCAGGGAGAACAGGCCCTCCTGGCACCTTCTACCA
CTTCCACATGTTACCCGTGCAGTTCTTTGTCCCAACATCAGTGTGAAGTACAGTCTCTTAGGAGGGGAT
AGTCTGCCCTTCCGTTGTGACCCAGACTGCCTGGAGGTGAGCACTCGCTGGGCCCTGGATCGAGAGCTCC
GGGAGAAGTATGTCTGGAGGCTTTGTGCATAGTGGCAGGCCCTGGTCCCAACAAGAGACGGTGACTCT
GTCCTTCCAGTGACAGTGTATGATGAGGACGACTCGCGCCACCTTCTCTGGAGGTGTGGCACTGCC
AGCGCGTGGTGGAGTTTAAGCGGAAGGAGGGCACTGTGGTGGCCACCCTGCAGGTGTTTCGATGCGAGATG
TGGTGCCAGCGTCTGGGGAGCTGGTGAGACGGTACACAAACACACTCCTCTCAGGGGACTCCTGGGCCCA
GCAGACCTTCCGGTGGAGCATTGCGCCATCGAGACCTTGGTCCAGGTCAACAACAACCTCCGTTCCGGCA
ACCATGCACAATTACAAGCTGATTCTCAACAGGAGCCTGTCTATCTCAGAGAGCCGAGTCTGCAGCTCG
CGGTCCTGGTCAACGACTCAGACTTCCAGGGCCCTGGGGCAGGTGGTATCCTCGTCTCCATTTCAACGT
GTCTGTACTGCCCGTCAACCTGAACTACCCAGGGCCTACTCCTTCCAGTGAATAAGAGGGCCCGCCG
TATGCCAGATCGGAAAGTCTGTGTGAAAAGTCCAGGAGTTCAGCGGTGTCTCCATCCAGTACAAGC
TGCAGCCTTCCAGCATCAACTGCACTGCCCTAGGTGTGGTCACTCACCCGAGGACACTCGGGACCCT
ATTTGTAATGACACAGAGGCCCTGCGGCGACCTGAGTGCACCAAGCTTCACTACAGGTTAGTCCACT



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GACCGGCAGACCCGCAGACAGACCCAGGCTTCGCTAGTGGTCACTGTGGAGGGGACATCCATTACTGAAG
 AAGTAGGCTGCCCAAGTCTGTGCAGTAAACAAGAGGCGCCCGAGTGTGAGGAATGTGGTGGCCTGGG
 TTCTCCAAGTGGCAGGTGCGAGTGGCGCCAGGGAGATGGTAAAGGGATCACCCAGGAATCTCCACCTGC
 TCCCCAGTACCAGGACCTGCCCGACGGCCACTGTGATGCTGTGGAGAGCCGGGATGCCAACATTTGCC
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 AAGGGCCGGATTTCCCGTCAAGTGGATGGCAATTGAGTCCCTTTTCGATCACATCTATACTACTCAAAGTG
 ATGTGTGGTCTTTGGAGTGTGCTCTGGGAGATTGTGACCCTGGGAGGCCAACCCCTACCCTGGAATTC
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 ATGACCGTCTGATGCTGCAGTGTGGAAGCAGGAGCCAGACAAGAGGCCAGTGTTCGATGACATCAGCA
 AGGATCTGGAGAAGATGATGGTCAAGAGCAGAGACTACTTGGACCTGGCTGCATCCACACCTTCGGACTC
 ACTGCTGTATGACGATGGGCTCTCAGAAGAGGAGACACCCTGGTGGACTGTAACAATGCTCCCTCCCG
 CGCTCCCTCCCTTCCACATGGATTGAAAACAACTCTATGGTAGAATTTACATGCATTTACTAGATTC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR211589 representing NM_001080780

Red=Cloning site Green=Tags(s)

MAKATSGAAGLGLKLILLPLLGEAPLGLYFSRDYWERLYVDQPAAGTPLLIVHALRDAPGEVPSFRLGQ
 HLYGVYRTRLHENDWIRINETTGLLYLNQSLDHSSWEQLSIRNGGFPLLTIFLQVFLGSTAQREGCHWP
 GCTRVYVFSFINDTFPNCSSFKAQDL CIPETA VSFVRVRENRPPTGFYHFHMLPVQFLCPNISVKYSLGGD
 SLPFRCDPDCLEVSTRWALDRELREKYVLEALCIVAGPGANKETVTL SFPVTVYEDDSAPTFSGGVGTA
 SAVVEFKRKEGTVVATLQVFDADVVPASGELVRRYTNTLLSGDSWAQQTFRVEHSP IETLVQVNNNSVRA
 TMHNYKILNRSLSISESRVLQAVLVNDSDFQGPAGGILVLFHNVSVLPVTLNLPRAYSFPVNRARR
 YAQIGKVCVENCQEFSGVSIQYKLPSSINCTALGVVTSPEDTSGTLFVNDTEALRRPECTKLQYTVVAT
 DRQTRRQTQASLVVTVEGTSITEEVGCPKSCAVNKRPECEECGGLGSPTRCEWRQGDGKGITRNFSTC
 SPSTRTPDGHCDAVESRDANICPQDCLRADIVGGHERGERQGIKAGYGCNCFPDEKCKFCPEPDSQGP
 LCDALCRTIITAALFSLIISILLSIFCVCHHHKHGHKPPIASAEMTFCRPAQGFPI SYSSSGTRRPSLDS
 TENQVPVDSFKIPEDPKWEFPRKNLVLGKTLGEGEFKVVKATAFRLKGRAGYTTAVKMLKENASQSEL
 RDLLSEFNLLKQVNHPHVIKLYGACSDGPLLLIVEYAKYGSRLRFLRDSRKIGPAYVSGGSRNSSSLD
 HPDERVLTMGDLISFAWQISRGMYLAEMKLVHRDLAARNILVAEGRKMKISDFGLSRDVYEEDSYVKKS
 KGRIPVKWMAIESLFDHIYTTQSDVWFSFVLLWEIVTLGGNYPYGIPPERL FNLLKTGHRMERPDNCSEE
 MYRLMLQCWKQEPDKRPVFADISKDLEKMMVKSRYLDLAASTPDSLSLLYDDGLSEETPLVDCNNAPLP
 RSLPSTWIENKLYGRISHAFTRF

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_001080780

ORF Size: 3219 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_001080780.1](#), [NP_001074249.1](#)

RefSeq Size: 7341 bp

RefSeq ORF: 3222 bp

Locus ID: 19713

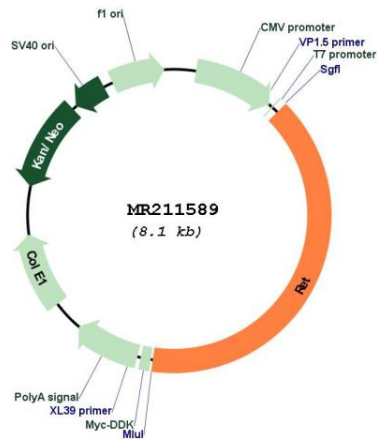
UniProt ID: [P35546](#)

Cytogenetics: 6 55.86 cM

MW: 119.9 kDa

Gene Summary: Receptor tyrosine-protein kinase involved in numerous cellular mechanisms including cell proliferation, neuronal navigation, cell migration, and cell differentiation upon binding with glial cell derived neurotrophic factor family ligands. Phosphorylates PTK2/FAK1. Regulates both cell death/survival balance and positional information. Required for the molecular mechanisms orchestration during intestine organogenesis; involved in the development of enteric nervous system and renal organogenesis during embryonic life, and promotes the formation of Peyer's patch-like structures, a major component of the gut-associated lymphoid tissue. Modulates cell adhesion via its cleavage by caspase in sympathetic neurons and mediates cell migration in an integrin (e.g. ITGB1 and ITGB3)-dependent manner. Involved in the development of the neural crest. Active in the absence of ligand, triggering apoptosis through a mechanism that requires receptor intracellular caspase cleavage. Acts as a dependence receptor; in the presence of the ligand GDNF in somatotrophs (within pituitary), promotes survival and down regulates growth hormone (GH) production, but triggers apoptosis in absence of GDNF. Regulates nociceptor survival and size. Triggers the differentiation of rapidly adapting (RA) mechanoreceptors. Mediator of several diseases such as neuroendocrine cancers; these diseases are characterized by aberrant integrins-regulated cell migration. Mediates, through interaction with GDF15-receptor GFRAL, GDF15-induced cell-signaling in the brainstem which induces inhibition of food-intake. Activates MAPK- and AKT-signaling pathways (PubMed:28846099).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR211589