

# Recombinant Human Ret Proto-Oncogene, GST-tagged

**Cat. No.** RET-5475H    **Lot. No.** (See product label)

## SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Product Overview</b>  | Recombinant humanRET catalytic domain (amino acids 658-1114) with GST tag, activated in vitrovia auto-phosphorylation.                                                                                                                                                                                                                                                  |
| <b>Species</b>           | Human                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Source</b>            | Insect Cells                                                                                                                                                                                                                                                                                                                                                            |
| <b>ProteinLength</b>     | 658-1114 a.a.                                                                                                                                                                                                                                                                                                                                                           |
| <b>Description</b>       | The RETproto-oncogene encodes a receptor tyrosine kinase for members of the glialcell line-derived neurotrophic factor family of extracellular signallingmolecules. RET loss of function mutations are associated with the developmentof Hirschsprung" s disease, while gain of function mutations are associatedwith the development of various types of human cancer. |
| <b>Form</b>              | Liquid in 50 mMTris, pH 7.5 + 150 mM NaCl + 0.5 mM EDTA + 0.02% Triton X-100 + 2 mM DTT +50% glycerol.                                                                                                                                                                                                                                                                  |
| <b>Purity</b>            | ≥ 90% as determinedby SDS-PAGE analysis                                                                                                                                                                                                                                                                                                                                 |
| <b>MolecularWeight</b>   | 79.0 kDa                                                                                                                                                                                                                                                                                                                                                                |
| <b>Specific Activity</b> | 2382 nmole ofphosphate transferred to Abl1 peptide substrate (EAIYAAPFAKKK) per minute permg of total protein at 30°C. Activity determined at a final proteinconcentration of 1.67 µg/ml.                                                                                                                                                                               |

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|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Concentration</b>   | 0.31 mg/ml                                                                                                                       |
| <b>Storage</b>         | Stable for 6 months in working aliquots at -80°C. Avoid repeated freeze-thaw cycles.                                             |
| <b>Official Symbol</b> | RET                                                                                                                              |
| <b>Pathways</b>        | Endocytosis; Pathways in cancer; SIDS Susceptibility Pathways; Signaling events regulated by Ret tyrosine kinase; Thyroid cancer |

## GENE INFORMATION

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Gene Name</b>      | RET ret proto-oncogene [ Homosapiens ]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Synonyms</b>       | RET; ret proto-oncogene; PTC; MTC1; HSCR1; MEN2A; MEN2B; RET51; CDHF12; CDHR16; RET-ELE1; proto-oncogene tyrosine-protein kinase receptor Ret; OTTHUMP00000019479; OTTHUMP00000216967; proto-oncogene c-Ret; receptor tyrosine kinase; RET transforming sequence; cadherin family member 12; hydroxyaryl-protein kinase; cadherin-related family member 16; ret proto-oncogene (multiple endocrine neoplasia and medullary thyroid carcinoma 1, Hirschsprung disease); EC 2.7.10.1; Proto-oncogene tyrosine-protein kinase receptor Ret; Cadherin family member 12; Proto-oncogene c-Ret |
| <b>Gene ID</b>        | 5979                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>mRNA Refseq</b>    | NM_020630                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Protein Refseq</b> | NP_065681                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>MIM</b>            | 164761                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>UniProt ID</b>     | P07949                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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| <b>Chromosome Location</b> | 10q11.2                                                                                                                                                                          |
| <b>Function</b>            | ATP binding; calciumion binding; nucleotide binding; protein binding; protein tyrosine kinaseactivity; receptor activity; transmembrane receptor protein tyrosine kinaseactivity |

**Crystallographic structure of the dimeric tyrosine kinase domain of the human proto-oncogene Ret (rainbow colored cartoon, N-terminus = blue, C-terminus = red).**

