

RET Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1132a**Specification**

RET Antibody - Product Information

Application	WB
Primary Accession	P07949
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1

Description

RET (ret proto-oncogene) is a member of the cadherin superfamily and a receptor tyrosine kinase, which are cell-surface molecules that transduce signals for cell growth and differentiation. It can undergo oncogenic activation in vivo and in vitro by cytogenetic rearrangement. Ligands that bind the Ret receptor include the glial cell line-derived neurotrophic factor (GDNF) and its congeners neurturin, persephin and artemin. Alterations in the corresponding Ret gene are associated with diseases including papillary thyroid carcinoma, multiple endocrine neoplasia (type 2A and 2B), familial medullary thyroid carcinoma and a congenital developmental disorder known as Hirschsprung's disease. The Tyr905 residue located in the Ret kinase domain plays a crucial role in Ret catalytic and biological activity. Substitution of Phe for Tyr905 dramatically inhibits Ret autophosphorylation activity.

Immunogen

Purified recombinant fragment of RET (aa896-1063) expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

RET Antibody - Additional Information

Gene ID 5979

Other Names

Proto-oncogene tyrosine-protein kinase receptor Ret, 2.7.10.1, Cadherin family member 12, Proto-oncogene c-Ret, Soluble RET kinase fragment, Extracellular cell-membrane anchored RET cadherin 120 kDa fragment, RET, CDHF12, CDHR16, PTC, RET51

Dilution

WB~~1/500 - 1/2000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

RET Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

RET Antibody - Protein Information

Name RET ([HGNC:9967](#))

Synonyms CDHF12, CDHR16, PTC, RET51

Function

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:28846097, PubMed:28953886, PubMed:28846099). Isoform 1 in complex with GFRAL induces higher activation of MAPK- signaling pathway than isoform 2 in complex with GFRAL (PubMed:28846099).

Cellular Location

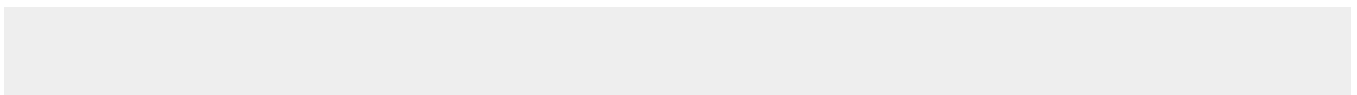
Cell membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein Note=Predominantly located on the plasma membrane. In the presence of SORL1 and GFRA1, directed to endosomes.

RET Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

RET Antibody - Images



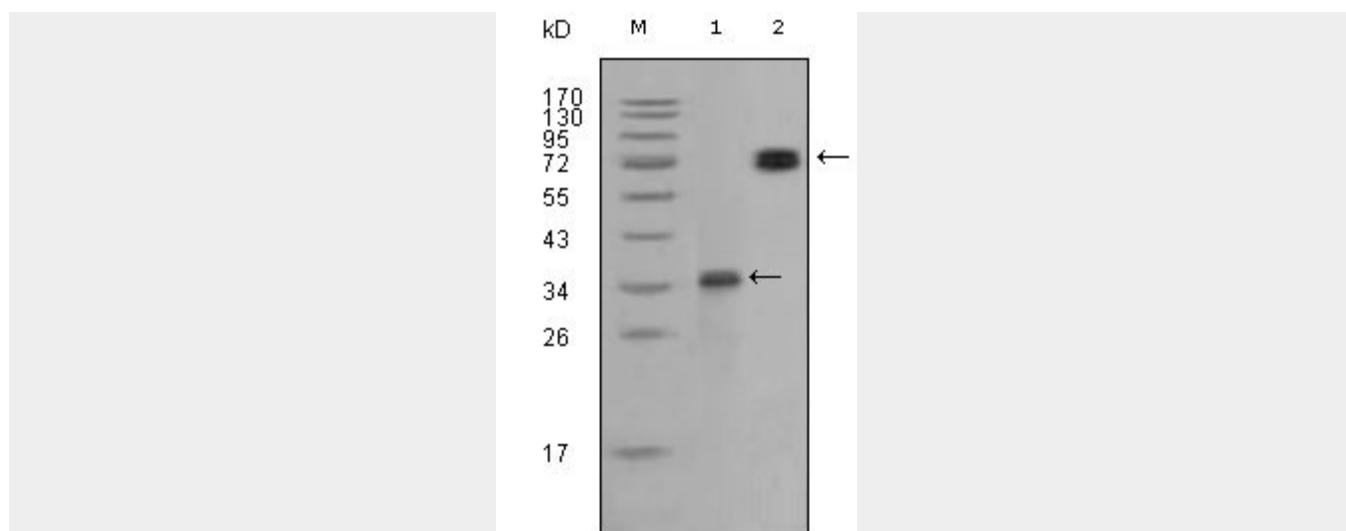


Figure 1: Western blot analysis using RET mouse mAb against truncated RET recombinant protein (1) and RET (aa658-1063)-hlgGFc transfected CHO-K1 cell lysate (2).

RET Antibody - References

1. Young HM. Anderson RB. Anderson CR. Auton Neurosci. 2004, May 31,112(1-2):1-14. Review.
2. Myers SM. Mulligan LM. Cancer Res. 2004, Jul 1,64(13):4453-63.