

[21357690](http://www.uniprot.org/citations/21357690), PubMed: [21454698](http://www.uniprot.org/citations/21454698), PubMed: [24560924](http://www.uniprot.org/citations/24560924), PubMed: [28846097](http://www.uniprot.org/citations/28846097), PubMed: [28846099](http://www.uniprot.org/citations/28846099), PubMed: [28953886](http://www.uniprot.org/citations/28953886), PubMed: [31118272](http://www.uniprot.org/citations/31118272)). In contrast to most receptor tyrosine kinases, RET requires not only its cognate ligands but also coreceptors, for activation (PubMed: [21994944](http://www.uniprot.org/citations/21994944), PubMed: [23333276](http://www.uniprot.org/citations/23333276), PubMed: [28846097](http://www.uniprot.org/citations/28846097), PubMed: [28846099](http://www.uniprot.org/citations/28846099), PubMed: [28953886](http://www.uniprot.org/citations/28953886)). GDNF ligands (GDNF, NRTN, ARTN, PSPN and GDF15) first bind their corresponding GDNFR coreceptors (GFRA1, GFRA2, GFRA3, GFRA4 and GFRAL, respectively), triggering RET autophosphorylation and activation, leading to activation of downstream signaling pathways, including the MAPK- and AKT-signaling pathways (PubMed: [21994944](http://www.uniprot.org/citations/21994944), PubMed: [23333276](http://www.uniprot.org/citations/23333276), PubMed: [24560924](http://www.uniprot.org/citations/24560924), PubMed: [25242331](http://www.uniprot.org/citations/25242331), PubMed: [28846097](http://www.uniprot.org/citations/28846097), PubMed: [28846099](http://www.uniprot.org/citations/28846099), PubMed: [28953886](http://www.uniprot.org/citations/28953886)). Acts as a dependence receptor via the GDNF-GFRA1 signaling: 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 (PubMed: [20616503](http://www.uniprot.org/citations/20616503), PubMed: [21994944](http://www.uniprot.org/citations/21994944)). Required for the molecular mechanisms orchestration during intestine organogenesis via the ARTN-GFRA3 signaling: 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 (By similarity). Mediates, through interaction with GDF15-receptor GFRAL, GDF15-induced cell-signaling in the brainstem which triggers an aversive response, characterized by nausea, vomiting, and/or loss of appetite in response to various stresses (PubMed: [28846097](http://www.uniprot.org/citations/28846097), PubMed: [28846099](http://www.uniprot.org/citations/28846099), PubMed: [28953886](http://www.uniprot.org/citations/28953886)). 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 (PubMed: [20702524](http://www.uniprot.org/citations/20702524), PubMed: [21357690](http://www.uniprot.org/citations/21357690)). Also active in the absence of ligand, triggering apoptosis through a mechanism that requires receptor intracellular caspase cleavage (PubMed: [21357690](http://www.uniprot.org/citations/21357690)). Triggers the differentiation of rapidly adapting (RA) mechanoreceptors (PubMed: [20064382](http://www.uniprot.org/citations/20064382)). Involved in the development of the neural crest (By similarity). Regulates nociceptor survival and size (By similarity). Phosphorylates PTK2/FAK1 (PubMed: [21454698](http://www.uniprot.org/citations/21454698)).

Cellular Location

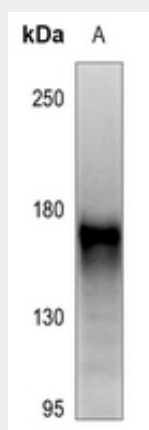
Cell membrane; Single-pass type I membrane protein. Endosome membrane; Single-pass type I membrane protein Note=Predominantly located on the plasma membrane (PubMed:23333276, PubMed:9575150). In the presence of SORL1 and GFRA1, directed to endosomes (PubMed:23333276).

Anti-RET (pY1062) Antibody - Protocols

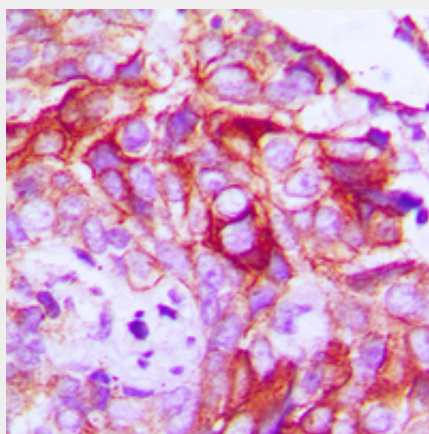
Provided below are standard protocols that you may find useful for product applications.

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

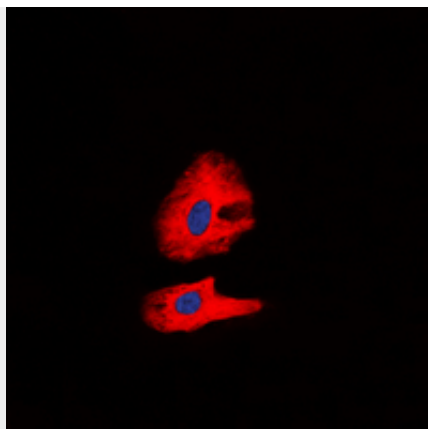
Anti-RET (pY1062) Antibody - Images



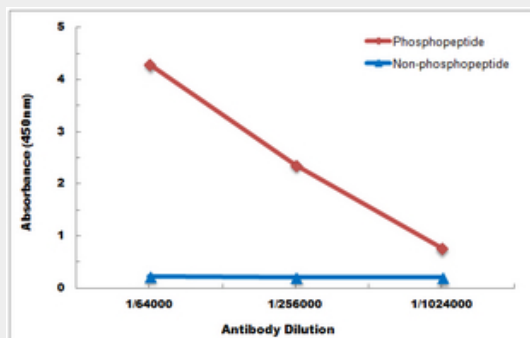
Western blot analysis of RET (pY1062) expression in HEK293T (A) whole cell lysates.



Immunohistochemical analysis of RET (pY1062) staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of RET (pY1062) staining in K562 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).



Direct ELISA antibody dose-response curve using Anti-RET (pY1062) Antibody. Antigen (phosphopeptide and non-phosphopeptide) concentration is 5 ug/ml. Goat Anti-Rabbit IgG (H&L) - HRP was used as the secondary antibody, and signal was developed by TMB substrate.

Anti-RET (pY1062) Antibody - Background

KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human RET (pY1062). The exact sequence is proprietary.