10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

RET Antibody (Ascites)

Mouse Monoclonal Antibody (Mab)
Catalog # AM1869a

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P07949
Other Accession	NP_065681.1, NP_066124.1
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgM,K
Clone Names	188CT11.2.3
Calculated MW	124319

Additional Information

Gene ID	5979
Other Names	Proto-oncogene tyrosine-protein kinase receptor Ret, 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
Target/Specificity	This RET Monoclonal antibody was raised using purified His-tagged recombinant human RET.
Dilution	WB~~ 1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Mouse monoclonal antibody supplied in crude ascites with 0.09% (W/V) sodium azide.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	RET Antibody (Ascites) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	RET {ECO:0000303|PubMed:2660074, ECO:0000312|HGNC:HGNC:9967}
Function	Receptor tyrosine-protein kinase involved in numerous cellular mechanisms including cell proliferation, neuronal navigation, cell migration, and cell differentiation in response to glia cell line- derived growth family factors

(GDNF, NRTN, ARTN, PSPN and GDF15) (PubMed:20064382, PubMed:20616503, PubMed:20702524, PubMed:21357690, PubMed:21454698, PubMed:24560924, PubMed:28846097, PubMed:28846099, PubMed:28953886, PubMed:31118272). In contrast to most receptor tyrosine kinases, RET requires not only its cognate ligands but also coreceptors, for activation (PubMed:21994944, PubMed:23333276, PubMed:28846097, PubMed:28846099, PubMed: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, PubMed:23333276, PubMed:24560924, PubMed:25242331, PubMed:28846097, PubMed:28846099, PubMed: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, PubMed: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, PubMed:28846099, PubMed: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, PubMed:21357690). Also active in the absence of ligand, triggering apoptosis through a mechanism that requires receptor intracellular caspase cleavage (PubMed:21357690). Triggers the differentiation of rapidly adapting (RA) mechanoreceptors (PubMed:20064382). Involved in the development of the neural crest (By similarity). Regulates nociceptor survival and size (By similarity). Phosphorylates PTK2/FAK1 (PubMed: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).

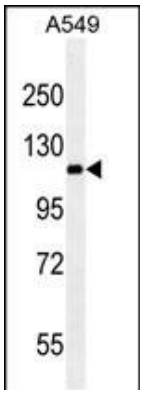
Background

This gene, a member of the cadherin superfamily, encodes one of the receptor tyrosine kinases, which are cell-surface molecules that transduce signals for cell growth and differentiation. This gene plays a crucial role in neural crest development, and it can undergo oncogenic activation in vivo and in vitro by cytogenetic rearrangement. Mutations in this gene are associated with the disorders multiple endocrine neoplasia, type IIA, multiple endocrine neoplasia, type IIB, Hirschsprung disease, and medullary thyroid carcinoma. Two transcript variants encoding different isoforms have been found for this gene. Additional transcript variants have been described but their biological validity has not been confirmed.

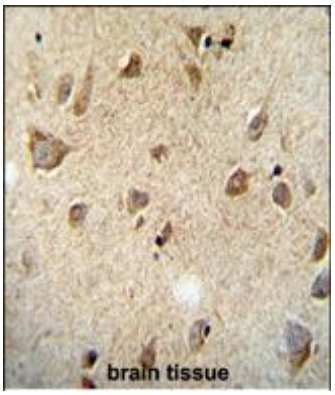
References

Siqueira, D.R., et al. Endocr. Relat. Cancer 17(4):953-963(2010)
Gockel, H.R., et al. Hum. Genet. 128(4):353-364(2010)
Kim, H.K., et al. Anticancer Res. 30(9):3621-3627(2010)
Pacini, F., et al. Clin Oncol (R Coll Radiol) 22(6):475-485(2010)
Jugessur, A., et al. PLoS ONE 5 (7), E11493 (2010) :

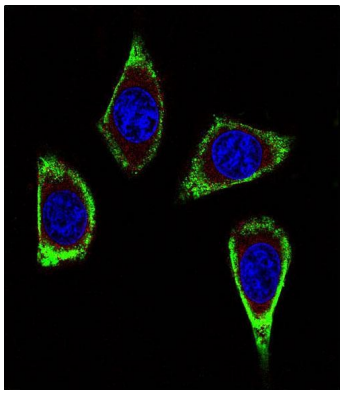
Images



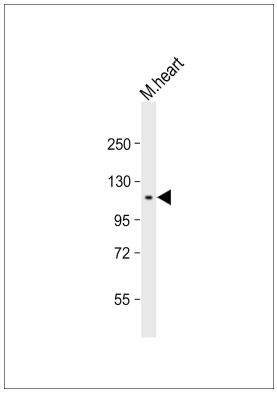
RET (Cat. #AM1869a) western blot analysis in A549 cell line lysates (35µg/lane).This demonstrates the RET antibody detected the RET protein (arrow).



RET Monoclonal(Ascites) (Cat. #AM1869a) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the RET Monoclonal(Ascites) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of RET Antibody (Ascites)(Cat#AM1869a) with MDA-MB231 cell followed by Alexa Fluor® 488-conjugated goat anti-mouse lgG (green).Actin filamentshave been labeled with Alexa Fluor? 555 phalloidin (red). DAPI was used to stain the cell nuclear (blue).



Anti-RET Antibody (Ascites) at 1:1000 dilution + mouse heart lysate Secondary Goat Anti-mouse IgM, (H+L),Peroxidase conjugated at 1/10000 dilution. Predicted band size : 124319 Da Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Prognostic and Predictive Values of Subcellular Localisation of RET in Renal Clear-Cell Carcinoma.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.