



Mouse (monoclonal) Anti-Human c-Ret Unconjugated

PRODUCT ANALYSIS SHEET

Catalog Number:	AHO1482
Lot Number:	See product label
Quantity/Volume:	100 µg/0.2 mL
Clone Number:	421R25
Isotype:	IgG1 κ (mouse)
Form of Antibody:	Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 1% bovine serum albumin.
Preservation:	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
Purification:	Purified from ascites by affinity chromatography.
Immunogen:	Recombinant fragment of human c-Ret extracellular domain expressed in <i>E. coli</i> .
Specificity:	<p>This antibody recognizes a protein of 170 kDa identified as c-Ret. c-Ret is a tyrosine kinase receptor for glial cell line-derived neurotrophic factors (GDNFs: neurturin, persephin, and artemin) and plays an important role in the development of the enteric nervous system and the kidney. In humans, inactivating mutations of c-Ret results in Hirschsprung's disease, and constitutively active c-Ret mutations result in endocrine neoplasia and familial medullary thyroid carcinoma. Activation of the c-Ret can initiate a cascade of events including the activation of the Ras → Raf → ERK1&2 pro-growth signaling pathway. c-Ret is regulated by phosphorylation on multiple tyrosine and serine sites. Phosphorylation of c-Ret on serine 696 by protein kinase A (PKA) promotes lamellipodia formation of neuronal cells induced by GDNF, a critical step in neuritegenesis.</p> <p>This antibody does not react with other receptor tyrosine kinases including PDGFRα, PDGFRβ and FGFR1.</p>
Species Reactivity:	Human. Does not react with mouse and rat. Other species not tested.
Applications:	This antibody is suitable for use in Western blotting.
Suggested Working Dilutions:	For Western blotting, the recommended concentration is 1 µg/mL. The optimal antibody concentration should be determined for each specific application.
Recommended Positive Control:	Human TT cells.
Storage:	Store at 2-8°C. For long term storage, aliquot into small volumes and store at -20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

This product is for research use only. Not for use in diagnostic procedures.

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PI AHO1482

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References:

Fukuda, T., et al. (2002) Novel mechanism of regulation of Rac activity and lamellipodia formation by RET tyrosine kinase. *J. Biol. Chem.* 277(21):19114-19121.

Carlomagno, F., et al. (2002) The kinase inhibitor PP1 blocks tumorigenesis induced by RET oncogenes. *Cancer Res.* 62(4):1077-1082.

Cohen, M.S., et al. (2002) Inhibition of medullary thyroid carcinoma cell proliferation and RET phosphorylation by tyrosine kinase inhibitors. *Surgery* 132(6):960-967.

You, L., et al. (2001) Glial cell-derived neurotrophic factor (GDNF)-induced migration and signal transduction in corneal epithelial cells. *Invest. Ophthalmol. Vis. Sci.* 42(11):2496-2504.

Jing, S., et al. (1996) GDNF-induced activation of the Ret protein tyrosine kinase is mediated by GDNFR- α , a novel receptor for GDNF. *Cell* 85(7):1113-1124.

Ederly, P., et al. (1994) Mutations of the RET proto-oncogene in Hirschsprung's disease. *Nature* 367(6461):378-380.

Related Products:

c-Ret [pS ⁶⁹⁶] Phosphorylation Site Specific Antibody	Cat. #	44-274
PAK1/2/3 [pS ¹⁴¹] Phosphorylation Site Specific Antibody	Cat. #	44-940G
Pro-Growth Sampler Pack	Cat. #	44-587G
Dok-2 [pY ¹⁴²] (mouse) Phosphorylation Site Specific Antibody	Cat. #	44-264
c-Jun [pS ⁷³] Phosphorylation Site Specific Antibody	Cat. #	44-292G
Vav1 [pY ¹⁶⁰] Phosphorylation Site Specific Antibody	Cat. #	44-482

**Western Blot Analysis**

Proteins from cell extracts of human TT cells were resolved by SDS-PAGE and transferred to PVDF. The membranes were incubated with this c-Ret monoclonal antibody (clone 421R25) at a concentration of 1 μ g/mL for two hours at room temperature. After washing, the membranes were incubated with a goat F(ab')₂ anti-mouse IgG alkaline phosphatase conjugated antibody (Cat. # AMI4405) at a 1:2000 dilution. Bands were detected with CDP-substrate using the WesternStarTM method (Tropix) and Kodak BioMax film.

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