

Ret (8D10C9): sc-101422

BACKGROUND

The Ret proto-oncogene is structurally related to the growing family of tyrosine kinase transmembrane receptors and is involved in GDNF signaling. By alternative splicing, two isoforms of the Ret proto-oncogene product are generated. The isoforms differ from each other by having either 9 or 51 carboxy-terminal amino acids. The Ret gene products include two glycosylated proteins and, in Tunicamycin treated cells, a non-glycosylated protein consistent with the predicted Ret molecular weight based on sequence analysis. Tumor-specific rearrangements of the Ret proto-oncogene have been identified in papillary thyroid carcinomas leading to the formation of different transforming fusion proteins sharing the tyrosine kinase domain of Ret. In contrast to the Ret proto-oncogene, the rearranged forms are constitutively phosphorylated on tyrosine and are translocated from the membrane to the cytoplasm.

REFERENCES

1. Takahashi, M., et al. 1988. Cloning and expression of the Ret proto-oncogene encoding a tyrosine kinase with two potential transmembrane domains. *Oncogene* 3: 571-578.
2. Grieco, M., et al. 1990. PTC is a novel rearranged form of the Ret proto-oncogene and is frequently detected *in vivo* in human thyroid papillary carcinomas. *Cell* 60: 557-563.
3. Tahira, T., et al. 1990. Characterization of Ret proto-oncogene mRNAs encoding two isoforms of the protein product in a human neuroblastoma cell line. *Oncogene* 5: 97-102.

CHROMOSOMAL LOCATION

Genetic locus: RET (human) mapping to 10q11.21.

SOURCE

Ret (8D10C9) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 896-1063 of Ret of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Ret (8D10C9) is recommended for detection of Ret of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ret siRNA (h): sc-36404, Ret shRNA Plasmid (h): sc-36404-SH and Ret shRNA (h) Lentiviral Particles: sc-36404-V.

Molecular Weight of Ret precursor: 150 kDa.

Molecular Weight of mature Ret: 170 kDa.

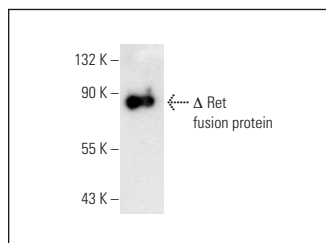
Positive Controls: TT whole cell lysate: sc-364195.

RECOMMENDED SUPPORT REAGENTS

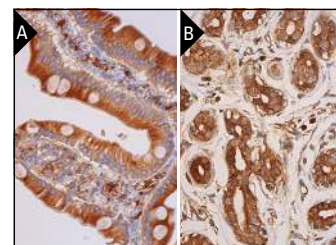
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Ret (8D10C9): sc-101422. Western blot analysis of human truncated recombinant Ret fusion protein.



Ret (8D10C9): sc-101422. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells (A) and human breast tissue showing cytoplasmic staining of glandular cells and myoepithelial cells (B).

SELECT PRODUCT CITATIONS

1. Estrada-Zuniga, C.M., et al. 2022. A RET::GRB2 fusion in pheochromocytoma defies the classic paradigm of RET oncogenic fusions. *Cell Rep. Med.* 3: 100686.
2. Miyazaki, I., et al. 2023. Vepafestininib is a pharmacologically advanced RET-selective inhibitor with high CNS penetration and inhibitory activity against RET solvent front mutations. *Nat. Cancer* 4: 1345-1361.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



See **Ret (C-3): sc-365943** for Ret antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.