SANTA CRUZ BIOTECHNOLOGY, INC.

Ret (C-19): sc-167

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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.

CHROMOSOMAL LOCATION

Genetic locus: RET (human) mapping to 10q11.21; Ret (mouse) mapping to 6 F1.

SOURCE

Ret (C-19) is available as either rabbit (sc-167) or goat (sc-167-G) affinity purified polyclonal antibody raised against a peptide mapping at the C-terminus of Ret isoform C of human origin.

PRODUCT

Each vial contains either 100 µg (sc-167) or 200 µg (sc-167-G) IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ret (C-19) is available conjugated to agarose (sc-167 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

Blocking peptide available for competition studies, sc-167 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ret (C-19) is recommended for detection of Ret isoform C and, to a lesser extent, Ret isoform A of mouse, rat and 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Ret (C-19) is also recommended for detection of Ret isoform C and, to a lesser extent, Ret isoform A in additional species, including bovine and avian.

Suitable for use as control antibody for Ret siRNA (h): sc-36404, Ret siRNA (m): sc-36405, Ret shRNA Plasmid (h): sc-36404-SH, Ret shRNA Plasmid (m): sc-36405-SH, Ret shRNA (h) Lentiviral Particles: sc-36404-V and Ret shRNA (m) Lentiviral Particles: sc-36405-V.

Molecular Weight of Ret precursor: 150 kDa.

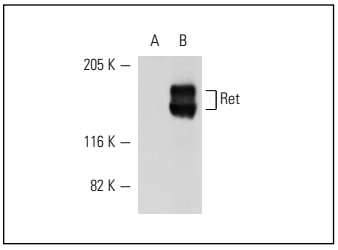
Molecular Weight of mature Ret: 170 kDa.

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

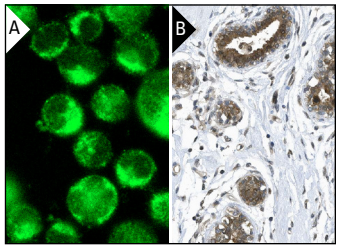
STORAGE

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

DATA



Ret (C-19)-G: sc-167-G. Western blot analysis of Ret expression in Ret isoform A (**A**) and Ret isoform C (**B**) transfected NIH/3T3 cells.



Ret (C-19): sc-167. Immunofluorescence staining of methanol-fixed K-562 cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human breast tissue showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Trupp, M., et al. 1996. Functional receptor for GDNF encoded by the c-ret proto-oncogene. Nature 381: 785-789.
2. Durbec, P., et al. 1996. GDNF signalling through the Ret receptor tyrosine kinase. Nature 381: 789-793.
3. Worby, C.A., et al. 1996. Glial cell line-derived neurotrophic factor signals through the Ret receptor and activates mitogen-activated protein kinase. J. Biol. Chem. 271: 23619-23622.
4. Rodrigues, D.M, et al. 2011. Glial cell line-derived neurotrophic factor is a key neurotrophin in the postnatal enteric nervous system. Neurogastroenterol. Motil. 23: e44-e56.
5. Garcia-Lavandeira, M., et al. 2012. Craniopharyngiomas express embryonic stem cell markers (SOX2, OCT4, KLF4, and SOX9) as pituitary stem cells but do not coexpress RET/GFRA3 receptors. J. Clin. Endocrinol. Metab. 97: E80-E87.
6. Diaz-Rodriguez, E., et al. 2012. Direct promoter induction of p19Arf by Pit-1 explains the dependence receptor RET/Pit-1/p53-induced apoptosis in the pituitary somatotroph cells. Oncogene 31: 2824-2835.
7. Macia, A., et al. 2012. Sprouty1 is a candidate tumor-suppressor gene in medullary thyroid carcinoma. Oncogene 31: 3961-3972.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **Ret (C-3): sc-365943** or **Ret (8D10C9): sc-101422**, our highly recommended monoclonal alternatives to Ret (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Ret (C-3): sc-365943**.