SANTA CRUZ BIOTECHNOLOGY, INC.

Fhit (WW-7): sc-101231

BACKGROUND

Fhit, a candidate tumor suppressor gene, contains the FRA3B common fragile site and is highly susceptible to carcinogen damage. The pattern of mutational inactivation seen with the Fhit gene is unique compared with other known tumor suppressors. Fhit gene structure and expression have been shown to be altered in esophageal, head, neck, lung, gastric, breast and cervical carcinomas. It has been demonstrated that Fhit exon loss is associated with smoking duration or asbestos exposure. The Fhit protein is a member of the histidine triad (HIT) superfamily and functions as a dinucleoside 5',5'''-P^1,P^3-triphosphate hydrolase.

REFERENCES

1. Mao, L., et al. 1996. Frequent abnormalities of Fhit, a candidate suppressor gene, in head and neck cancer cell lines. Cancer Res. 56: 5128-5131.
2. Barnes, L.D., et al. 1996. Fhit, a putative tumor suppressor in humans, is a dinucleoside 5',5'''-P1,P3-triphosphate hydrolase. Biochemistry 35: 11529-11535.
3. Siprashvili, Z., et al. 1997. Replacement of Fhit in cancer cells suppresses tumorigenicity. Proc. Natl. Acad. Sci. USA 94: 13771-13776.
4. Bugert, P., et al. 1997. Fhit gene and the FRA3B region are not involved in the genetics of renal cell carcinomas. Genes Chromosomes Cancer 20: 9-15.
5. Michael, D., et al. 1997. Frequent deletions of Fhit and FRA3B in Barrett's metaplasia and esophageal adenocarcinomas. Oncogene 15: 1653-1659.
6. Le Beau, M.M., et al. 1998. An Fhit tumor suppressing gene? Genes Chromosome Cancer 21: 281-289.
7. Nelson, H.H., et al. 1998. Chromosome 3p14 alterations in lung cancer: evidence that Fhit exon deletion is a target of tobacco carcinogen and asbestos. Cancer Res. 58: 1804-1807.

CHROMOSOMAL LOCATION

Genetic locus: FHIT (human) mapping to 3p14.2; Fhit (mouse) mapping to 14 A1.

SOURCE

Fhit (WW-7) is a mouse monoclonal antibody raised against recombinant Fhit of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Fhit (N-19) is recommended for detection of Fhit 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fhit siRNA (h): sc-106872, Fhit siRNA (m): sc-145170, Fhit shRNA Plasmid (h): sc-106872-SH, Fhit shRNA Plasmid (m): sc-145170-SH, Fhit shRNA (h) Lentiviral Particles: sc-106872-V and Fhit shRNA (m) Lentiviral Particles: sc-145170-V.

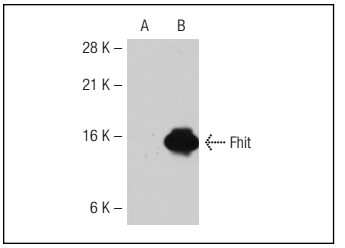
Molecular Weight of Fhit: 16.8 kDa.

Positive Controls: Fhit (h): 293T Lysate: sc-114836.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



Fhit (WW-7): sc-101231. Western blot analysis of Fhit expression in non-transfected: sc-117752 (**A**) and human Fhit transfected: sc-114836 (**B**) 293T whole cell lysates.

RESEARCH USE

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