SANTA CRUZ BIOTECHNOLOGY, INC.

C17orf75 (H-17): sc-81862

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Chromosome 17 makes up over 2.5% of the human genome with about 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes. Chromosome 17 is also linked to neurofibromatosis, a condition characterized by neural and epidermal lesions, and dysregulated Schwann cell growth. Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease are also associated with chromosome 17. The C17orf75 gene product has been provisionally designated C17orf75 pending further characterization.

REFERENCES

1. Welsch, M.J., et al. 2005. Birt-Hogg-Dube syndrome. Int. J. Dermatol. 44: 668-673.
2. Nusbaum, R., et al. 2006-2007. Susceptibility to breast cancer: hereditary syndromes and low penetrance genes. Breast Dis. 27: 21-50.
3. Al-Dirbashi, O.Y., et al. 2007. Quantification of N-acetylaspartic acid in urine by LC-MS/MS for the diagnosis of Canavan disease. J. Inherit. Metab. Dis. 30: 612.
4. Dann, R.B., et al. 2007. Strategies for ovarian cancer prevention. Obstet. Gynecol. Clin. North Am. 34: 667-686.
5. Farrell, C.J. and Plotkin, S.R. 2007. Genetic causes of brain tumors: neurofibromatosis, tuberous sclerosis, von Hippel-Lindau, and other syndromes. Neurol. Clin. 25: 925-946.
6. Suela, J., et al. 2007. Neurofibromatosis 1, and not TP53, seems to be the main target of chromosome 17 deletions in *de novo* acute myeloid leukemia. J. Clin. Oncol. 25: 1151-1152.
7. Tai, Y.C., et al. 2007. Breast cancer risk among male BRCA1 and BRCA2 mutation carriers. J. Natl. Cancer Inst. 99: 1811-1814.

CHROMOSOMAL LOCATION

Genetic locus: C17orf75 (human) mapping to 17q11.2.

SOURCE

C17orf75 (H-17) is a mouse monoclonal antibody raised against recombinant C17orf75 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of 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.

APPLICATIONS

C17orf75 (H-17) is recommended for detection of C17orf75 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for C17orf75 siRNA (h): sc-93862, C17orf75 shRNA Plasmid (h): sc-93862-SH and C17orf75 shRNA (h) Lentiviral Particles: sc-93862-V.

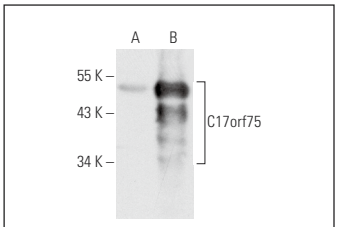
Molecular Weight of C17orf75: 45 kDa.

Positive Controls: C17orf75 (h2): 293T Lysate: sc-116623 or Jurkat whole cell lysate: sc-2204.

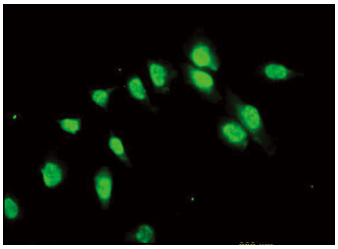
RECOMMENDED SUPPORT REAGENTS

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.

DATA



C17orf75 (H-17): sc-81862. Western blot analysis of C17orf75 expression in non-transfected: sc-117752 (**A**) and human C17orf75 transfected: sc-116623 (**B**) 293T whole cell lysates.



C17orf75 (H-17): sc-81862. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Iturrate, A., et al. 2022. Mutations in SCNM1 cause orofaciodigital syndrome due to minor intron splicing defects affecting primary cilia. Am. J. Hum. Genet. E-published.

RESEARCH USE

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

PROTOCOLS

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