

α -centractin (h): 293T Lysate: sc-127874

BACKGROUND

α -centractin, also known as ACTR1A, CTRN1, ARP1, actin-RPV or centrosome-associated actin homolog, is a 376 amino acid cytoplasmic protein that belongs to the actin family and the ARP1 subfamily. While it is associated with the centrosome, α -centractin is a component of a multi-subunit complex involved in microtubule based vesicle motility. The gene that encodes α -centractin maps to human chromosome 10q24.32. Spanning nearly 135 million base pairs, chromosome 10 makes up approximately 4.5% of total DNA in cells and encodes nearly 1,200 genes. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

1. Troelstra, C., Landsvater, R.M., Wiegant, J., van der Ploeg, M., Viel, G., Buys, C.H. and Hoeijmakers, J.H. 1992. Localization of the nucleotide excision repair gene ERCC6 to human chromosome 10q11-q21. *Genomics* 12: 745-749.
2. Lees-Miller, J.P., Helfman, D.M. and Schroer, T.A. 1992. A vertebrate actin-related protein is a component of a multisubunit complex involved in microtubule-based vesicle motility. *Nature* 359: 244-246.
3. Clark, S.W., Staub, O., Clark, I.B., Holzbaur, E.L., Paschal, B.M., Vallee, R.B. and Meyer, D.I. 1994. β -centractin: characterization and distribution of a new member of the centractin family of actin-related proteins. *Mol. Biol. Cell* 5: 1301-1310.
4. Jabs, E.W., Li, X., Scott, A.F., Meyers, G., Chen, W., Eccles, M., Mao, J.I., Charnas, L.R., Jackson, C.E. and Jaye, M. 1994. Jackson-Weiss and Crouzon syndromes are allelic with mutations in fibroblast growth factor receptor 2. *Nat. Genet.* 8: 275-279.
5. Berger, P., Young, P. and Suter, U. 2002. Molecular cell biology of Charcot-Marie-Tooth disease. *Neurogenetics* 4: 1-15.
6. Teresi, R.E., Zbuk, K.M., Pezzolesi, M.G., Waite, K.A. and Eng, C. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
7. Cho, M.Y., Kim, H.S., Eng, C., Kim, D.S., Kang, S.J., Eom, M., Yi, S.Y. and Bronner, M.P. 2008. First report of ovarian dysgerminoma in Cowden syndrome with germline PTEN mutation and PTEN-related 10q loss of tumor heterozygosity. *Am. J. Surg. Pathol.* 32: 1258-1264.
8. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.
9. Laugel, V., Dalloz, C., Durand, M., Sauvinaud, F., Kristensen, U., Vincent, M.C., Pasquier, L., Odent, S., Cormier-Daire, V., Gener, B., Tobias, E.S., Tolmie, J.L., Martin-Coignard, D., Drouin-Garraud, V., Heron, D., Journal, H., Raffo, E., Vigneron, J., Lyonnet, S., Murday, V., et al. 2010. Mutation update for the CSB/ERCC6 and CSA/ERCC8 genes involved in Cockayne syndrome. *Hum. Mutat.* 31: 113-126.

CHROMOSOMAL LOCATION

Genetic locus: ACTR1A (human) mapping to 10q24.32.

PRODUCT

α -centractin (h): 293T Lysate represents a lysate of human α -centractin transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

α -centractin (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive α -centractin antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

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.