SANTA CRUZ BIOTECHNOLOGY, INC.

ZWINT (h): 293T Lysate: sc-112460

BACKGROUND

ZWINT (ZW10 interactor), also known as KNTC2AP or HZwint-1, is a 277 amino acid protein that is involved in kinetochore function. Localized to the cytoplasm during interphase and to kinetochores from late prophase to anaphase, ZWINT interacts with ZW10 (Zeste White 10) and functions to regulate the association between ZW10 and kinetochores. Additionally, ZWINT is part of a kinetochore complex composed of proteins such as MIS12 (MIND kinetochore complex component) and PMF-1 (polyamine-modulated factor 1) that work in concert to ensure proper kinetochore formation and spindle checkpoint activity. Defects in the gene encoding ZWINT are associated with the pathogenesis of Roberts syndrome, an autosomal recessive disorder characterized by growth retardation due to premature chromosome separation.

REFERENCES

1. Starr, D.A., et al. 2000. HZwint-1, a novel human kinetochore component that interacts with HZW10. J. Cell Sci. 113: 1939-1950.
2. Wang, H., et al. 2004. Human ZWINT-1 specifies localization of Zeste White 10 to kinetochores and is essential for mitotic checkpoint signaling. J. Biol. Chem. 279: 54590-54598.
3. Obuse, C., et al. 2004. A conserved Mis12 centromere complex is linked to heterochromatic HP1 and outer kinetochore protein ZWINT-1. Nat. Cell Biol. 6: 1135-1141.
4. Musio, A., et al. 2004. Recapitulation of the roberts syndrome cellular phenotype by inhibition of INCENP, ZWINT-1 and ZW10 genes. Gene 331: 33-40.
5. Hirose, H., et al. 2004. Implication of ZW10 in membrane trafficking between the endoplasmic reticulum and Golgi. EMBO J. 23: 1267-1278.
6. Emanuele, M.J., et al. 2005. Measuring the stoichiometry and physical interactions between components elucidates the architecture of the vertebrate kinetochore. Mol. Biol. Cell 16: 4882-4892.
7. Kops, G.J., et al. 2005. ZW10 links mitotic checkpoint signaling to the structural kinetochore. J. Cell Biol. 169: 49-60.
8. Lin, Y.T., et al. 2006. Hec1 sequentially recruits ZWINT-1 and ZW10 to kinetochores for faithful chromosome segregation and spindle checkpoint control. Oncogene 25: 6901-6914.

CHROMOSOMAL LOCATION

Genetic locus: ZWINT (mouse) mapping to 10q21.1.

PRODUCT

ZWINT (h): 293T Lysate represents a lysate of human ZWINT transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

ZWINT (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ZWINT antibodies. Recommended use: 10-20 µl 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.