SANTA CRUZ BIOTECHNOLOGY, INC.

ZWINT (A-7): sc-271646

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: Zwint (mouse) mapping to 10 B5.3.

SOURCE

ZWINT (A-7) is a mouse monoclonal antibody raised against amino acids 1-252 representing full length ZWINT of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ZWINT (A-7) is available conjugated to agarose (sc-271646 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271646 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271646 PE), fluorescein (sc-271646 FITC), Alexa Fluor® 488 (sc-271646 AF488), Alexa Fluor® 546 (sc-271646 AF546), Alexa Fluor® 594 (sc-271646 AF594) or Alexa Fluor® 647 (sc-271646 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271646 AF680) or Alexa Fluor® 790 (sc-271646 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ZWINT (A-7) is recommended for detection of ZWINT of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 ZWINT siRNA (m): sc-63264, ZWINT shRNA Plasmid (m): sc-63264-SH and ZWINT shRNA (m) Lentiviral Particles: sc-63264-V.

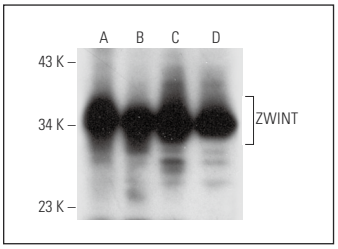
Molecular Weight of ZWINT: 34 kDa.

Positive Controls: mouse brain extract: sc-2253, Neuro-2A whole cell lysate: sc-364185 or ZWINT (m): 293T Lysate: sc-124836.

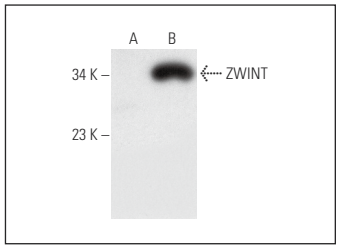
RECOMMENDED SUPPORT REAGENTS

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



ZWINT (A-7): sc-271646. Western blot analysis of ZWINT expression in mouse brain (**A**) and mouse cerebellum (**B**) tissue extracts and Neuro-2A (**C**) and EOC 20 (**D**) whole cell lysates.



ZWINT (A-7): sc-271646. Western blot analysis of ZWINT expression in non-transfected: sc-117752 (**A**) and mouse ZWINT transfected: sc-124836 (**B**) 293T whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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.