SANTA CRUZ BIOTECHNOLOGY, INC.

ZC3H7A (B-3): sc-398981

BACKGROUND

The zinc finger CCCH domain-containing protein 7A (ZC3H7A), also known as ZC3H7, HSPC055 or ZC3HDC7, is a 971 amino acid protein that contains a C3H1-type zinc finger domain, three C3H1-type zinc fingers and three TPR repeats. Belonging to the ZC3H12 family, ZC3H7A localizes to the nucleus. Existing as two alternatively spliced isoforms, ZC3H7A is encoded by a gene located on human chromosome 16p13.13. Chromosome 16 makes up nearly 3% of human cellular DNA and is associated with a variety of genetic disorders. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, though through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. Breuning, M.H., et al. 1993. Rubinstein-Taybi syndrome caused by submicroscopic deletions within 16p13.3. Am. J. Hum. Genet. 52: 249-254.
3. Bomont, P., et al. 2000. The gene encoding gigaxonin, a new member of the cytoskeletal BTB/kelch repeat family, is mutated in giant axonal neuropathy. Nat. Genet. 26: 370-374.

CHROMOSOMAL LOCATION

Genetic locus: ZC3H7A (human) mapping to 16p13.13; Zc3h7a (mouse) mapping to 16 A1.

SOURCE

ZC3H7A (B-3) is a mouse monoclonal antibody raised against amino acids 885-948 mapping near the C-terminus of ZC3H7A of human 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.

ZC3H7A (B-3) is available conjugated to agarose (sc-398981 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398981 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398981 PE), fluorescein (sc-398981 FITC), Alexa Fluor® 488 (sc-398981 AF488), Alexa Fluor® 546 (sc-398981 AF546), Alexa Fluor® 594 (sc-398981 AF594) or Alexa Fluor® 647 (sc-398981 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398981 AF680) or Alexa Fluor® 790 (sc-398981 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

ZC3H7A (B-3) is recommended for detection of ZC3H7A of mouse, rat and human 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 ZC3H7A siRNA (h): sc-92985, ZC3H7A siRNA (m): sc-155468, ZC3H7A shRNA Plasmid (h): sc-92985-SH, ZC3H7A shRNA Plasmid (m): sc-155468-SH, ZC3H7A shRNA (h) Lentiviral Particles: sc-92985-V and ZC3H7A shRNA (m) Lentiviral Particles: sc-155468-V.

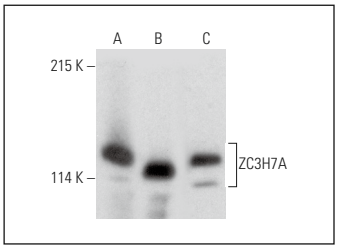
Molecular Weight of ZC3H7A isoforms: 111/20 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Hep G2 nuclear extract: sc-364819 or MCF7 whole cell lysate: sc-2206.

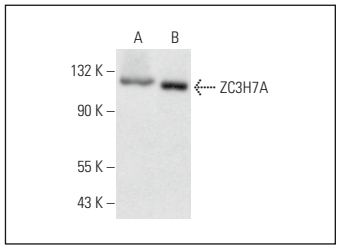
RECOMMENDED SUPPORT REAGENTS

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



ZC3H7A (B-3): sc-398981. Western blot analysis of ZC3H7A expression in Hep G2 (**A**), SK-MEL-28 (**B**) and WEHI-231 (**C**) nuclear extracts.



ZC3H7A (B-3): sc-398981. Western blot analysis of ZC3H7A expression in HeLa nuclear extract (**A**) and MCF7 whole cell lysate (**B**).

SELECT PRODUCT CITATIONS

1. MacLeod, G., et al. 2019. Genome-wide CRISPR-Cas9 screens expose genetic vulnerabilities and mechanisms of temozolomide sensitivity in glioblastoma stem cells. Cell Rep. 27: 971-986.e9.

RESEARCH USE

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