Zic3 (SQ-15): sc-101201

SANTA CRUZ® BIOTECHNOLOGY

The Power to Question

BACKGROUND

Zic3 (zinc finger protein of the cerebellum 3) is a C_2H_2 zinc finger transcription factor that establishes a proper left-right axis and midline neural patterning during early development of the vertebrate embryo. Mutations in this gene cause X-linked visceral heterotaxy, which includes congenital heart disease and left-right axis defects in organs. Zic3 mutations in the zinc finger DNA binding domain and in the N-terminal domain result in loss of reporter gene transactivation, and mutations between amino acids 253-323 of the Zic3 protein causes aberrant cytoplasmic localization rather than the wildtype nuclear localization.

REFERENCES

1. Nagai, T., et al. 1997. The expression of the mouse Zic1, Zic2, and Zic3 gene suggests an essential role for Zic genes in body pattern formation. Dev. Biol. 182: 299-313.

2. Ogura, H., et al. 2001. Behavioral abnormalities of Zic1 and Zic2 mutant mice: implications as models for human neurological disorders. Behav. Genet. 31: 317-324.

3. Salero, E., et al. 2001. Transcription factors Zic1 and Zic2 bind and trans-activate the apolipoprotein E gene promoter. J. Biol. Chem. 276: 1881-1888.

4. Herman, G.E., et al. 2002. The role of Zic3 in vertebrate development. Cytogenet. Genome Res. 99: 229-235.

5. Ebert, P.J., et al. 2003. Zic1 represses Math1 expression via interactions with the Math1 enhancer and modulation of Math1 autoregulation. Development 130: 1949-1959.

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7. Grinberg, I., et al. 2004. Heterozygous deletion of the linked genes Zic1 and Zic4 is involved in Dandy-Walker malformation. Nat. Genet. 36: 1053-1055.

8. LocusLink Report (LocusID: 7547). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: ZIC3 (human) mapping to Xq26.3; Zic3 (mouse) mapping to X A6.

SOURCE

Zic3 (SQ-15) is a mouse monoclonal antibody raised against recombinant Zic3 of human origin.

PRODUCT

Each vial contains 100 µg IgG$_{2a}$ 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.

RESEARCH USE

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

APPLICATIONS

Zic3 (SQ-15) is recommended for detection of Zic3 of mouse, rat and 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Zic3 siRNA (h): sc-106711, Zic3 siRNA (m): sc-155610, Zic3 shRNA Plasmid (h): sc-106711-SH, Zic3 shRNA Plasmid (m): sc-155610-SH, Zic3 shRNA (h) Lentiviral Particles: sc-106711-V and Zic3 shRNA (m) Lentiviral Particles: sc-155610-V.

Molecular Weight of Zic3: 56 kDa.

Positive Controls: Y79 cell lysate: sc-2240, human skeletal muscle extract: sc-363776 or Y79 nuclear extract: sc-2126.

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) Immunopre-cipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA
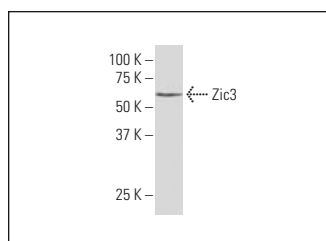
Zic3 (SQ-15): sc-101201. Western blot analysis of Zic3 expression in Y79 whole cell lysate.
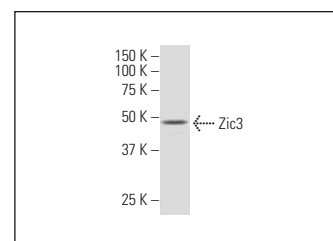
Zic3 (SQ-15): sc-101201. Western blot analysis of Zic3 expression in human skeletal muscle tissue extract.

SELECT PRODUCT CITATIONS

1. Chen, D., et al. 2020. LncRNA IGBP1-AS1/miR-24-1/Zic3 loop regulates the proliferation and invasion ability in breast cancer. Cancer Cell Int. 20: 153.

PROTOCOLS

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