

Zic3 (SQ-15): sc-101201

BACKGROUND

Zic3 (zinc finger protein of the cerebellum 3) is a C₂H₂ 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

- 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.
- 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.
- Salero, E., et al. 2001. Transcription factors Zic1 and Zic2 bind and transactivate the apolipoprotein E gene promoter. *J. Biol. Chem.* 276: 1881-1888.
- Herman, G.E., et al. 2002. The role of Zic3 in vertebrate development. *Cytogenet. Genome Res.* 99: 229-235.
- 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.
- Zhang, J., et al. 2004. Disruption of gradient expression of Zic3 resulted in abnormal intra-retinal axon projection. *Development* 131: 1553-1562.
- 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.
- 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.

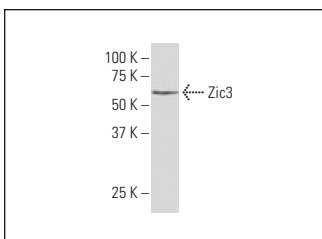
Molecular Weight of Zic3: 56 kDa.

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

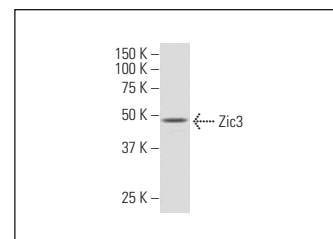
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: 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

- 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.