SANTA CRUZ BIOTECHNOLOGY, INC.

ZEB1 (416A7H10): sc-81428

BACKGROUND

ZEB1 (also designated Zfhep, for zinc finger homeodomain enhancer-binding protein, δEF1, AREB6, BZP and NIL-2A) is a non-receptor transcription factor analogous to the *Drosophila* ZFH-1 protein. ZEB1 contains two separate zinc-finger domains (ZD1 and ZD2), which are essential for DNA binding and repression, and a homeodomain (HD), which is not. ZEB1 also contains three repression domains, two of which flank ZD1, and a third located between HD and ZD2. ZEB1 represses transcription by site competition and enhancer silencing mechanisms, as well as by interacting with co-repressors through its repression domains. Interaction of ZEB1 with the TSHβ gene T3-response element may play a role in the modification of gene-specific regulation by thyroid hormones. In the embryo, ZEB1 is primarily expressed in the mesoderm, but changes in the level of expression during tissue maturation suggest a role for ZEB1 in the early histogenesis of mesodermal tissues. In addition to its role as an embryonic gene regulator, ZEB1 is also involved in regulating the development of certain skeletal structures.

REFERENCES

1. Funahashi, J., et al. 1993. δ-crystallin enhancer binding protein δEF1 is a zinc-finger homeodomain protein implicated in postgastrulation embryogenesis. Development 119: 433-446.
2. Franklin, A., et al. 1994. BZP, a novel serum-responsive zinc-finger protein that inhibits gene transcription. Mol. Cell. Biol. 14: 6773-6788.

CHROMOSOMAL LOCATION

Genetic locus: ZEB1 (human) mapping to 10p11.22.

SOURCE

ZEB1 (416A7H10) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the N-terminus of ZEB1 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

ZEB1 (416A7H10) is recommended for detection of ZEB1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for ZEB1 siRNA (h): sc-38643, ZEB1 shRNA Plasmid (h): sc-38643-SH and ZEB1 shRNA (h) Lentiviral Particles: sc-38643-V.

Molecular weight of ZEB1: 124 kDa.

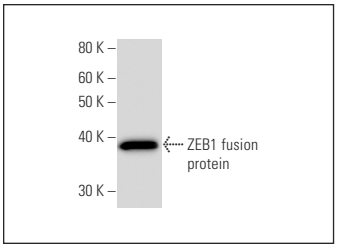
PROTOCOLS

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

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



ZEB1 (416A7H10): sc-81428. Western Blot analysis of human recombinant ZEB1 fusion protein.

SELECT PRODUCT CITATIONS

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2. Inuzuka, T., et al. 2009. Transcription factor 8 activates R-Ras to regulate angiogenesis. Biochem. Biophys. Res. Commun. 379: 510-513.
3. Chang, Y.C., et al. 2014. Arecoline-induced myofibroblast transdifferentiation from human buccal mucosal fibroblasts is mediated by ZEB1. J. Cell. Mol. Med. 18: 698-708.
4. Joseph, J.V., et al. 2014. TGF-β is an inducer of ZEB1-dependent mesenchymal transdifferentiation in glioblastoma that is associated with tumor invasion. Cell Death Dis. 5: e1443.
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6. Mai, T.T., et al. 2017. Salinomycin kills cancer stem cells by sequestering iron in lysosomes. Nat. Chem. 9: 1025-1033.
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8. Xu, J., et al. 2017. MicroRNA-150 functions as an antioncogenic regulator in osteosarcoma. Oncol. Lett. 14: 2483-2490.
9. Dong, L., et al. 2018. Post-transcription mediated Snail stabilization is involved in radiation exposure induced invasion and migration of hepatocarcinoma cells. Biomed. Pharmacother. 103: 767-772.
11. Vosgha, H., et al. 2018. miR-205 targets angiogenesis and EMT concurrently in anaplastic thyroid carcinoma. Endocr. Relat. Cancer 25: 323-337.

RESEARCH USE

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