

ZEB1 (R-17): sc-10573

BACKGROUND

ZEB (also designated Zfh1, for zinc finger homeodomain enhancer-binding protein, δ EF1, AREB6, BZP and NIL2A) is a 170 kDa non-receptor transcription factor analogous to the *Drosophila* ZFH-1 protein. ZEB contains two separate zinc finger domains (ZD1 and ZD2), which are essential for DNA binding and repression, and a homeodomain (HD), which is not. ZEB also contains three repression domains, two of which flank ZD1, and a third located between HD and ZD2. ZEB represses transcription by site competition and enhancer silencing mechanisms, as well as by interacting with corepressors through its repression domains. Interaction of ZEB with the TSH β gene T3-response element may play a role in the modification of gene-specific regulation by thyroid hormones. In the embryo, ZEB is primarily expressed in the mesoderm, but changes in the level of expression during tissue maturation suggest a role for ZEB in the early histogenesis of mesodermal tissues. In addition to its role as an embryonic gene regulator, ZEB is also involved in regulating the development of certain skeletal structures.

REFERENCES

1. Funahashi, J., Sekido, R., Murai, K., Kamachi, Y. and Kondoh, H. 1993. δ -crystallin enhancer binding protein delta EF1 is a zinc finger-homeodomain protein implicated in postgastrulation embryogenesis. *Development* 119: 433-446.
2. Franklin, A., Jetton, T., Shelton, K. and Magnuson, M. 1994. BZP, a novel serum-responsive zinc finger protein that inhibits gene transcription. *Mol. Cell. Biol.* 14: 6773-88.
3. Sekido, R., Murai, K., Kamachi, Y. and Kondoh, H. 1997. Two mechanisms in the action of repressor δ EF1: binding site competition with an activator and active repression. *Genes Cells* 2: 771-783.
4. Darling, D.S., Gaur, N.K. and Zhu, B. 1998. A zinc finger homeodomain transcription factor binds specific thyroid hormone response elements. *Mol. Cell. Endocrinol.* 139: 25-35.
5. Takagi, T., Moribe, H., Kondoh, H. and Higashi, Y. 1998. δ EF1, a zinc finger and homeodomain transcription factor, is required for skeleton patterning in multiple lineages. *Development* 125: 21-31.

CHROMOSOMAL LOCATION

Genetic locus: Zeb1 (mouse) mapping to 18 A1.

SOURCE

ZEB1 (R-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ZEB1 of rat origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-10573 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10573 X, 200 μ g/0.1 ml.

APPLICATIONS

ZEB1 (R-17) is recommended for detection of ZEB1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 ZEB1 siRNA (m): sc-38644, ZEB1 siRNA (r): sc-156138, ZEB1 shRNA Plasmid (m): sc-38644-SH, ZEB1 shRNA Plasmid (r): sc-156138-SH, ZEB1 shRNA (m) Lentiviral Particles: sc-38644-V and ZEB1 shRNA (r) Lentiviral Particles: sc-156138-V.

ZEB1 (R-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular weight of ZEB1: 124 kDa.

SELECT PRODUCT CITATIONS

1. Davies, S.R., Sakano, S., Zhu, Y. and Sandell, L.J. 2002. Distribution of the transcription factors Sox9, AP-2, and δ EF1 in adult murine articular and meniscal cartilage and growth plate. *J. Histochem. Cytochem.* 50: 1059-1065.
2. Hoek, K., Rimm, D.L., Williams, K.R., Zhao, H., Ariyan, S., Lin, A., Kluger, H.M., Berger, A.J., Cheng, E., Trombetta, E.S., Wu, T., Niinobe, M., Yoshikawa, K., Hannigan, G.E. and Halaban, R. 2004. Expression profiling reveals novel pathways in the transformation of melanocytes to melanomas. *Cancer Res.* 15: 5270-5282.

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 or our catalog for detailed protocols and support products.