SANTA CRUZ BIOTECHNOLOGY, INC.

ZEB1 (H-3): sc-515797

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 corepressors 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.

CHROMOSOMAL LOCATION

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

SOURCE

ZEB1 (H-3) is a mouse monoclonal antibody raised against amino acids 39-140 of ZEB1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515797 X, 200 µg/0.1 ml.

ZEB1 (H-3) is available conjugated to agarose (sc-515797 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515797 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515797 PE), fluorescein (sc-515797 FITC), Alexa Fluor® 488 (sc-515797 AF488), Alexa Fluor® 546 (sc-515797 AF546), Alexa Fluor® 594 (sc-515797 AF594) or Alexa Fluor® 647 (sc-515797 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515797 AF680) or Alexa Fluor® 790 (sc-515797 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ZEB1 (H-3) is recommended for detection of ZEB1 of 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 ZEB1 siRNA (h): sc-38643, ZEB1 shRNA Plasmid (h): sc-38643-SH and ZEB1 shRNA (h) Lentiviral Particles: sc-38643-V.

ZEB1 (H-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

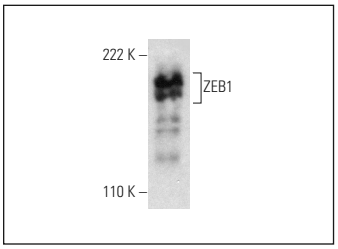
Molecular Weight of ZEB1: 124 kDa.

Positive Controls: WI-38 nuclear extract.

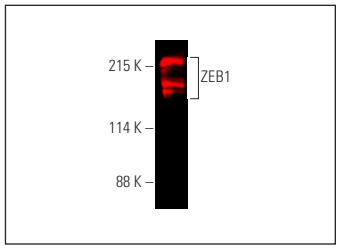
STORAGE

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

DATA



ZEB1 (H-3): sc-515797. Western blot analysis of ZEB1 expression in WI-38 nuclear extract.



ZEB1 (H-3): sc-515797. Near-infrared western blot analysis of ZEB1 expression in WI-38 nuclear extract. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

1. Jin, X., et al. 2018. MicroRNA-105 promotes epithelial-mesenchymal transition of nonsmall lung cancer cells through upregulating Mcl-1. J. Cell. Biochem. 120: 5880-5888.
2. Zhang, H., et al. 2019. Upregulation of miR-33b promotes endometriosis via inhibition of Wnt/β-catenin signaling and ZEB1 expression. Mol. Med. Rep. 19: 2144-2152.
3. Qian, W., et al. 2019. lncRNA ZEB1-AS1 promotes pulmonary fibrosis through ZEB1-mediated epithelial-mesenchymal transition by competitively binding miR-141-3p. Cell Death Dis. 10: 129.
4. Li, N., et al. 2019. The role of ZEB1 in the pathogenesis of morbidly adherent placenta. Mol. Med. Rep. 20: 2812-2822.
5. Li, L.Y., et al. 2019. ZEB1 regulates the activation of hepatic stellate cells through Wnt/β-catenin signaling pathway. Eur. J. Pharmacol. 8: 172787.
6. Feng, T., et al. 2019. The microRNA-708-5p/ZEB1/EMT axis mediates the metastatic potential of osteosarcoma. Oncol. Rep. 43: 491-502.
7. Momeny, M., et al. 2020. Anti-tumor activity of cediranib, a pan-vascular endothelial growth factor receptor inhibitor, in pancreatic ductal adenocarcinoma cells. Cell. Oncol. 43: 81-93.
8. Osumi, H., et al. 2020. Tumor cell-derived angiopoietin-like protein 2 establishes a preference for glycolytic metabolism in lung cancer cells. Cancer Sci. 10: 348-349.
9. Maroufi, N.F., et al. 2020. Inhibitory effect of melatonin on hypoxia-induced vasculogenic mimicry via suppressing epithelial-mesenchymal transition (EMT) in breast cancer stem cells. Eur. J. Pharmacol. 881: 173282.

RESEARCH USE

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