

ZEB2 (H-260): sc-48789



The Power to Question

BACKGROUND

SMAD regulates gene expression by interacting with different classes of transcription factors including DNA-binding multi-zinc finger proteins. ZEB2 (zinc finger E-box-binding protein 2) is a member of the δ -EF1/Zfh1 family of 2-handed zinc finger/homeodomain proteins. ZEB2 contains a SMAD-binding domain, a homeodomain and two clusters of zinc fingers on the N- and C-termini. ZEB2, also known as SMADIP1, ZFHX1B and SIP1 (SMAD interacting protein 1), may be induced by TGF β treatment. ZEB2 plays a crucial role in normal embryonic development of neural structures and neural crest. The human ZEB2 gene maps to chromosome 2q22.3. Mutations in the ZEB2 gene cause a form of Hirschsprung disease (HSCR). Patients with ZEB2 mutations show mental retardation, delayed motor development, epilepsy, microcephaly, distinct facial features and/or congenital heart disease, all symptoms of HSCR.

REFERENCES

1. van Grunsven, L., et al. 2001. SIP1 (Smad interacting protein1) and δ EF1 (δ -crystallin enhancer binding factor) are structurally similar transcriptional repressors. *J. Bone Joint Surg. Am.* 83: 40-47.
2. Cacheux, V., et al. 2001. Loss-of-function mutations in SIP1 SMAD interacting protein1 result in a syndromic Hirschsprung disease. *Hum. Mol. Genet.* 10: 1503-1510.

CHROMOSOMAL LOCATION

Genetic locus: ZEB2 (human) mapping to 2q22.3; Zeb2 (mouse) mapping to 2 B.

SOURCE

ZEB2 (H-260) is a rabbit polyclonal antibody raised against amino acids 401-660 mapping within an internal region of ZEB2 of human origin.

PRODUCT

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

APPLICATIONS

ZEB2 (H-260) is recommended for detection of ZEB2 of mouse, rat and human 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).

ZEB2 (H-260) is also recommended for detection of ZEB2 in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for ZEB2 siRNA (h): sc-38641, ZEB2 siRNA (m): sc-38642, ZEB2 shRNA Plasmid (h): sc-38641-SH, ZEB2 shRNA Plasmid (m): sc-38642-SH, ZEB2 shRNA (h) Lentiviral Particles: sc-38641-V and ZEB2 shRNA (m) Lentiviral Particles: sc-38642-V.

Molecular Weight of SIP1: 157 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Sánchez-Tilló, E., et al. 2010. ZEB1 represses E-cadherin and induces an EMT by recruiting the SWI/SNF chromatin-remodeling protein BRG1. *Oncogene* 29: 3490-3500.
2. Xia, H., et al. 2010. miR-200a-mediated downregulation of ZEB2 and CTNNB1 differentially inhibits nasopharyngeal carcinoma cell growth, migration and invasion. *Biochem. Biophys. Res. Commun.* 391: 535-541.
3. Oztas, E., et al. 2010. Novel monoclonal antibodies detect Smad-interacting protein 1 (SIP1) in the cytoplasm of human cells from multiple tumor tissue arrays. *Exp. Mol. Pathol.* 89: 182-189.
4. Ellis, A.L., et al. 2010. Either ZEB1 or ZEB2/SIP1 can play a central role in regulating the Epstein-Barr virus latent-lytic switch in a cell-type-specific manner. *J. Virol.* 84: 6139-6152.
5. Wu, N., et al. 2011. Role of microRNA-26b in glioma development and its mediated regulation on EphA2. *PLoS ONE* 6: e16264.
6. Fassan, M., et al. 2011. MicroRNA expression profiling in human Barrett's carcinogenesis. *Int. J. Cancer* 129: 1661-1670.
7. Sánchez-Tilló, E., et al. 2012. EMT-activating transcription factors in cancer: beyond EMT and tumor invasiveness. *Cell. Mol. Life Sci.* 69: 3429-3456.

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.



Try **ZEB2 (E-11): sc-271984**, our highly recommended monoclonal alternative to ZEB2 (H-260). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ZEB2 (E-11): sc-271984**.