SANTA CRUZ BIOTECHNOLOGY, INC.

EED (3B12): sc-293203

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The transcriptional repressing Polycomb-group (PcG) and transcriptional activating trithorax-group (trxG) genes of *Drosophila* are part of a cellular memory system responsible for the stable inheritance of gene activity. PcG proteins assemble into multimeric protein complexes, which are involved in maintaining the transcriptional repressive state of genes over successive cell generations. EED (embryonic ectoderm development) is the human homolog of EED, a murine PcG gene homologous to the *Drosophila* homeotic gene, extra sex combs. The human EED protein is 99. 5% identical to the mouse EED protein and contains seven WD repeats, which are involved in protein-protein interactions. There are two human EED transcripts that contain a putative 407-nucleotide-long intron and give rise to two HEED protein isoforms, 535 and 494 amino acids in length. EED interacts in a highly specific manner, both *in vitro* and *in vivo,* with histone deacetylase (HDAC) proteins.

REFERENCES

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3. van der Vlag, J. and Otte, A.P. 1999. Transcriptional repression mediated by the human Polycomb-group protein EED involves histone deacetylation. Nat. Genet. 23: 474-478.
4. Peytavi, R., Hong, S.S., Gay, B., d'Angeac, A.D., Selig, L., Benichou, S., Benarous, R. and Boulanger, P. 1999. HEED, the product of the human homolog of the murine EED gene, binds to the matrix protein of HIV-1. J. Biol. Chem. 274: 1635-1645.
5. Wang, J., Mager, J., Chen, Y., Schneider, E., Cross, J.C., Nagy, A. and Magnuson, T. 2001. Imprinted X inactivation maintained by a mouse Polycomb group gene. Nat. Genet. 28: 371-375.
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CHROMOSOMAL LOCATION

Genetic locus: EED (human) mapping to 11q14.2; Eed (mouse) mapping to 7 E1.

SOURCE

EED (3B12) is a mouse monoclonal antibody raised against amino acids 342-441 of EED 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.

APPLICATIONS

EED (3B12) is recommended for detection of EED 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).

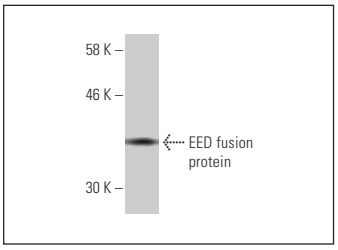
Suitable for use as control antibody for EED siRNA (h): sc-37823, EED siRNA (m): sc-37824, EED shRNA Plasmid (h): sc-37823-SH, EED shRNA Plasmid (m): sc-37824-SH, EED shRNA (h) Lentiviral Particles: sc-37823-V and EED shRNA (m) Lentiviral Particles: sc-37824-V.

Molecular Weight of EED isoforms 1/2/3: 50/53/46 kDa.

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



EED (3B12): sc-293203. Western blot analysis of human recombinant EED fusion protein.

SELECT PRODUCT CITATIONS

1. Xie, S., Wei, F., Sun, Y.M., Gao, Y.L., Pan, L.L., Tan, M.J., Wang, S.D., Ding, J. and Chen, Y. 2020. EZH2 inhibitors abrogate upregulation of trimethylation of H3K27 by Cdk9 inhibitors and potentiate its activity against diffuse large B-cell lymphoma. Haematologica 105: 1021-1031.
2. Zhang, S., Liao, W., Wu, Q., Huang, X., Pan, Z., Chen, W., Gu, S., Huang, Z., Wang, Y., Tang, X., Liang, S., Zhang, X., Chen, Y., Chen, S., Chen, W., Jiang, Y., Chen, C. and Qiu, G. 2020. LINC00152 upregulates ZEB1 expression and enhances epithelial-mesenchymal transition and oxaliplatin resistance in esophageal cancer by interacting with EZH2. Cancer Cell Int. 20: 569.

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.