SANTA CRUZ BIOTECHNOLOGY, INC.

EED (B-3): sc-518116

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 (1,4,5). 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

1. Sewalt, R.G., van der Vlag, J., Gunster, M.J., Hamer, K.M., den Blaauwen, J.L., Satijn, D.P., Hendrix, T., van Driel, R. and Otte, A.P. 1998. Characterization of interactions between the mammalian polycomb-group proteins Enx1/EZH2 and EED suggests the existence of different mammalian polycomb-group protein complexes. Mol. Cell. Biol. 18: 3586-3595.
2. Denisenko, O., Shnyreva, M., Suzuki, H. and Bomsztyk, K. 1998. Point mutations in the WD40 domain of Eed block its interaction with Ezh2. Mol. Cell. Biol. 18: 5634-5642.
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.
6. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 605984. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: EED (human) mapping to 11q14.2.

SOURCE

EED (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 36-58 near the N-terminus of EED of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

EED (B-3) is available conjugated to agarose (sc-518116 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518116 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518116 PE), fluorescein (sc-518116 FITC), Alexa Fluor® 488 (sc-518116 AF488), Alexa Fluor® 546 (sc-518116 AF546), Alexa Fluor® 594 (sc-518116 AF594) or Alexa Fluor® 647 (sc-518116 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518116 AF680) or Alexa Fluor® 790 (sc-518116 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EED (B-3) is recommended for detection of EED 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).

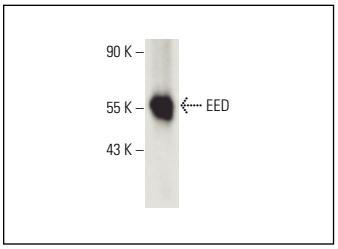
Suitable for use as control antibody for EED siRNA (h): sc-37823, EED shRNA Plasmid (h): sc-37823-SH and EED shRNA (h) Lentiviral Particles: sc-37823-V.

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

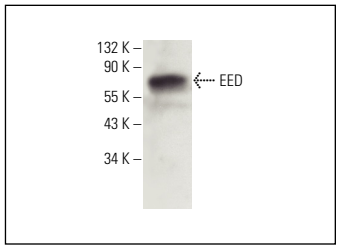
RECOMMENDED SUPPORT REAGENTS

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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



EED (B-3): sc-518116. Western blot analysis of human recombinant EED. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.



EED (B-3): sc-518116. Western blot analysis of EED expression in F9 whole cell lysate. Detection reagent used: m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM.

RESEARCH USE

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