SANTA CRUZ BIOTECHNOLOGY, INC.

EED (V-20): sc-18456

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 2 human EED transcripts that contain a putative 407-nucleotide-long intron and give rise to 2 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., et al. 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., et al. 1998. Point mutations in the WD40 domain of EED block its interaction with Ezh2. Mol. Cell. Biol. 18: 5634-5642.
3. Peytavi, R., et al. 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.
4. 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.
5. Wang, J., et al. 2001. Imprinted X inactivation maintained by a mouse Polycomb group gene. Nat. Genet. 28: 371-375.

CHROMOSOMAL LOCATION

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

SOURCE

EED (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EED of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-18456 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

EED (V-20) 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)], 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).

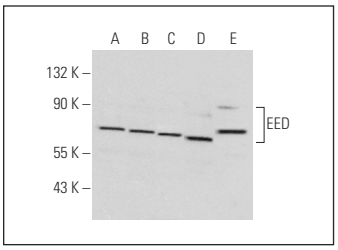
EED (V-20) is also recommended for detection of EED in additional species, including equine, canine, bovine, porcine and avian.

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.

Positive Controls: HL-60 nuclear extract: sc-2147, HL-60 whole cell lysate: sc-2209 or K-562 whole cell lysate: sc-2203.

DATA



EED (V-20): sc-18456. Western blot analysis of EED expression in HL-60 (**A**), K-562 (**B**) and U-2 OS (**C**) whole cell lysates and K-562 (**D**) and HL-60 (**E**) nuclear extracts.

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.