

EID-2 (E-15): sc-161549

BACKGROUND

As a regulator of transcription via chromatin remodeling, p300 is a histone acetyltransferase that binds to adenovirus E1A protein and may play a role in its transforming capacity. EID-2 (EP300-interacting inhibitor of differentiation 2), also known as CREBBP/EP300 inhibitor 2, is a 236 amino acid nuclear protein that cooperates with EID-2B to bind to the C-terminus of p300 to inhibit its activity. It also represses MYOD-dependent transcription and muscle differentiation. By interacting with SMAD2, SMAD3 and SMAD4, EID-2 selectively blocks the formation of TGF β -induced SMAD3-SMAD4 complex, thereby repressing TGF β /SMAD3-dependent signaling. Though it is abundantly expressed in placenta, EID-2 is highly expressed in skeletal muscle, heart, liver, brain and kidney. There are two isoforms of EID-2 that are produced as a result of alternative splicing events.

REFERENCES

- Miyake, S., Sellers, W.R., Safran, M., Li, X., Zhao, W., Grossman, S.R., Gan, J., DeCaprio, J.A., Adams, P.D. and Kaelin, W.G. 2000. Cells degrade a novel inhibitor of differentiation with E1A-like properties upon exiting the cell cycle. *Mol. Cell. Biol.* 20: 8889-8902.
- Brockmann, D. and Esche, H. 2003. The multifunctional role of E1A in the transcriptional regulation of CREB/CBP-dependent target genes. *Curr. Top. Microbiol. Immunol.* 272: 97-129.
- Ji, A., Dao, D., Chen, J. and MacLellan, W.R. 2003. EID-2, a novel member of the EID family of p300-binding proteins inhibits transactivation by MyoD. *Gene* 318: 35-43.
- Miyake, S., Yanagisawa, Y. and Yuasa, Y. 2003. A novel EID-1 family member, EID-2, associates with histone deacetylases and inhibits muscle differentiation. *J. Biol. Chem.* 278: 17060-17065.
- Lee, H.J., Lee, J.K., Miyake, S. and Kim, S.J. 2004. A novel E1A-like inhibitor of differentiation (EID) family member, EID-2, suppresses transforming growth factor (TGF)- β signaling by blocking TGF- β -induced formation of Smad3-Smad4 complexes. *J. Biol. Chem.* 279: 2666-2672.
- Sasajima, Y., Tanaka, H., Miyake, S. and Yuasa, Y. 2005. A novel EID family member, EID-3, inhibits differentiation and forms a homodimer or heterodimer with EID-2. *Biochem. Biophys. Res. Commun.* 333: 969-975.
- Bavner, A., Matthews, J., Sanyal, S., Gustafsson, J.A. and Treuter, E. 2005. EID3 is a novel EID family member and an inhibitor of CBP-dependent co-activation. *Nucleic Acids Res.* 33: 3561-3569.
- Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609773. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: EID2 (human) mapping to 19q13.2; Eid2 (mouse) mapping to 7 A3.

SOURCE

EID-2 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EID-2 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.

Blocking peptide available for competition studies, sc-161549 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EID-2 (E-15) is recommended for detection of EID-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with EID-1, EID-2B or EID-3.

EID-2 (E-15) is also recommended for detection of EID-2 in additional species, including canine.

Suitable for use as control antibody for EID-2 siRNA (h): sc-97371, EID-2 siRNA (m): sc-144607, EID-2 shRNA Plasmid (h): sc-97371-SH, EID-2 shRNA Plasmid (m): sc-144607-SH, EID-2 shRNA (h) Lentiviral Particles: sc-97371-V and EID-2 shRNA (m) Lentiviral Particles: sc-144607-V.

Molecular Weight of EID-2: 25 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 **EID-2 (C-8): sc-514902**, our highly recommended monoclonal alternative to EID-2 (E-15).