EID-2 (P-14): sc-161550



The Power to Question

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 MY0D-dependent transcription and muscle differentiation. By interacting with SMAD2, SMAD3 and SMAD4, EID-2 selectively blocks the formation of TGFB-induced SMAD3-SMAD4 complex, thereby repressing TGFB/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.
- 5. 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.

CHROMOSOMAL LOCATION

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

SOURCE

EID-2 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EID-2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-161550 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EID-2 (P-14) 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), 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); non cross-reactive with EID-1, EID-2B or EID-3.

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.

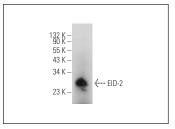
Molecular Weight of EID-2: 25 kDa.

Positive Controls: mouse heart extract: sc-2254.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



EID-2 (P-14): sc-161550. Western blot analysis of EID-2 expression in mouse heart tissue extract.

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.

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