SANTA CRUZ BIOTECHNOLOGY, INC.

p300 (F-4): sc-48343

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cyclic AMP-regulated gene expression frequently involves a DNA element designated the cAMP-regulated enhancer (CRE). Many transcription factors bind to this element, including the protein CREB which is activated as a result of phosphorylation by protein kinase A. It has been shown that protein kinase A-mediated CREB phosphorylation results in its binding to a nuclear protein designated CBP (for CREB-binding protein). These findings suggest that CBP has many of the properties expected of a CREB co-activator. Another high molecular weight transcriptional adapter protein, designated p300, is characterized by three cysteine and histidine-rich regions, of which the most carboxy-terminal region specifically binds the adenovirus E1A protein. p300 molecules lacking an intact E1A binding site bypass E1A repression even in the presence of high concentrations of E1A. Sequence analysis of CBP and p300 has revealed substantial homology, arguing that these proteins are members of a conserved family of co-activators.

REFERENCES

1. Chivra, J.C., et al. 1993. Phosphorylated CREB binds specifically to the nuclear protein CBP. Nature 365: 855-859.
2. Kwok, R.P.S., et al. 1993. Nuclear protein CBP is a coactivator for the transcription factor CREB. Nature 370: 223-229.
3. Arany, Z., et al. 1994. E1A-associated p300 and CREB-associated CBP belong to a conserved family of coactivators. Cell 77: 799-800.

CHROMOSOMAL LOCATION

Genetic locus: EP300 (human) mapping to 22q13.2; Ep300 (mouse) mapping to 15 E1.

SOURCE

p300 (F-4) is a mouse monoclonal antibody raised against amino acids 774-1045 of p300 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-48343 X, 200 µg/0.1 ml.

p300 (F-4) is available conjugated to agarose (sc-48343 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48343 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48343 PE), fluorescein (sc-48343 FITC), Alexa Fluor® 488 (sc-48343 AF488), Alexa Fluor® 546 (sc-48343 AF546), Alexa Fluor® 594 (sc-48343 AF594) or Alexa Fluor® 647 (sc-48343 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48343 AF680) or Alexa Fluor® 790 (sc-48343 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

p300 (F-4) is recommended for detection of p300 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:5000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

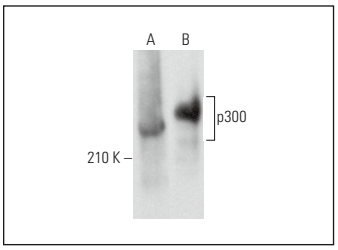
Suitable for use as control antibody for p300 siRNA (h): sc-29431, p300 siRNA (m): sc-29432, p300 siRNA (r): sc-270365, p300 shRNA Plasmid (h): sc-29431-SH, p300 shRNA Plasmid (m): sc-29432-SH, p300 shRNA Plasmid (r): sc-270365-SH, p300 shRNA (h) Lentiviral Particles: sc-29431-V, p300 shRNA (m) Lentiviral Particles: sc-29432-V and p300 shRNA (r) Lentiviral Particles: sc-270365-V.

p300 (F-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

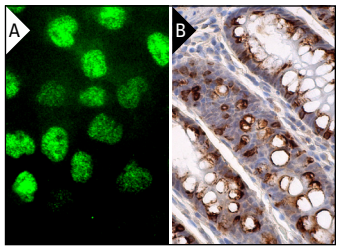
Molecular Weight of p300: 300 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, HeLa nuclear extract: sc-2120 or MCF7 nuclear extract: sc-2149.

DATA



p300 (F-4): sc-48343. Western blot analysis of p300 expression in Jurkat (**A**) and MCF7 (**B**) nuclear extracts.



p300 (F-4): sc-48343. Immunofluorescence staining of formalin-fixed A-431 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear and cytoplasmic staining of subset of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Sun, Z., et al. 2009. Acetylation of Nrf2 by p300/CBP augments promoter-specific DNA binding of Nrf2 during the antioxidant response. Mol. Cell. Biol. 29: 2658-2672.
2. Cheng, X., et al. 2019. Pacer is a mediator of mTORC1 and GSK3-TIP60 signaling in regulation of autophagosome maturation and lipid metabolism. Mol. Cell 73: 788-802.
3. Peng, L., et al. 2020. Deacetylase-independent function of SIRT6 couples GATA4 transcription factor and epigenetic activation against cardiomyocyte apoptosis. Nucleic Acids Res. 48: 4992-5005.

RESEARCH USE

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