SANTA CRUZ BIOTECHNOLOGY, INC.

AP-2δ (T-13): sc-132218

BACKGROUND

AP-2 transcription factor family members include AP-2α, AP-2β, AP-2γ, AP-2δ and AP-2ε, which specifically bind to DNA and regulate transcription of selected genes. AP-2 proteins contain a helix-span-helix motif at their C-terminus and a basic central region that, together, mediate DNA binding and dimerization. AP-2 family members have various roles in apoptosis, development, morphogenesis and cell-cycle control. AP-2δ, also known as TFAP2D or TFAP2BL1 (transcription factor AP-2 β-like 1), is a nuclear protein and is predominantly expressed in skeletal muscle, brain, small intestine, prostate, placenta and thymus. AP-2δ binds to DNA as a dimer, associated either as a homodimer or as a heterodimer with other members of the AP-2 family. Distinct from other members of the family, AP-2δ exhibits a different DNA sequence affinity and lacks the PY motif as well as other critical residues in its transactivation domain. This suggests that AP-2δ may interact with a separate group of coactivators and transactivate genes differently than the other AP-2 proteins.

REFERENCES

1. Zhao, F., Satoda, M., Licht, J.D., Hayashizaki, Y. and Gelb, B.D. 2001. Cloning and characterization of a novel mouse AP-2 transcription factor, AP-2δ, with unique DNA binding and transactivation properties. J. Biol. Chem. 276: 40755-40760.
2. Cheng, C., Ying, K., Xu, M., Zhao, W., Zhou, Z., Huang, Y., Wang, W., Xu, J., Zeng, L., Xie, Y. and Mao, Y. 2002. Cloning and characterization of a novel human transcription factor AP-2β like gene (TFAP2BL1). Int. J. Biochem. Cell Biol. 34: 78-86.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610161. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Zhao, F., Lufkin, T. and Gelb, B.D. 2003. Expression of Tfap2d, the gene encoding the transcription factor Ap-2δ, during mouse embryogenesis. Gene Expr. Patterns 3: 213-217.
5. Eckert, D., Buhl, S., Weber, S., Jäger, R. and Schorle, H. 2005. The AP-2 family of transcription factors. Genome Biol. 6: 246.
6. Wenke, A.K., Rothhammer, T., Moser, M. and Bosserhoff, A.K. 2006. Regulation of integrin α10 expression in chondrocytes by the transcription factors AP-2ε and Ets-1. Biochem. Biophys. Res. Commun. 345: 495-501.
7. Kim, J.M., Lee, K.H., Jeon, Y.J., Oh, J.H., Jeong, S.Y., Song, I.S., Kim, J.M., Lee, D.S. and Kim, N.S. 2006. Identification of genes related to Parkinson's disease using expressed sequence tags. DNA Res. 13: 275-286.
8. Sun, L., Huang, S., Wu, Q., Gu, S., Fu, X., Yu, K., Lu, F., Ji, C., Feng, C., Sun, R., Xie, Y. and Mao, Y. 2007. Identification of genes differentially regulated by transcription factor, AP-2δ. Front. Biosci. 12: 1699-1706.

CHROMOSOMAL LOCATION

Genetic locus: TFAP2D (human) mapping to 6p12.3; Tcfap2d (mouse) mapping to 1 A3.

RESEARCH USE

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

SOURCE

AP-2δ (T-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AP-2δ 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-132218 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-132218 X, 200 µg/0.1 ml.

APPLICATIONS

AP-2δ (T-13) is recommended for detection of AP-2δ 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 other AP-2 family members.

AP-2δ (T-13) is also recommended for detection of AP-2δ in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AP-2δ siRNA (h): sc-95077, AP-2δ siRNA (m): sc-141133, AP-2δ shRNA Plasmid (h): sc-95077-SH, AP-2δ shRNA Plasmid (m): sc-141133-SH, AP-2δ shRNA (h) Lentiviral Particles: sc-95077-V and AP-2δ shRNA (m) Lentiviral Particles: sc-141133-V.

AP-2δ (T-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of AP-2δ: 50 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.