SANTA CRUZ BIOTECHNOLOGY, INC.

AP-2β (H-87): sc-8976

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AP-2 transcription factor family members include AP-2α, AP-2β and AP-2γ, which specifically bind to the DNA consensus sequence CCCCAGGC and initiate transcription of selected genes. AP-2, also known as ERF-1, plays a role in regulating estrogen receptor expression. AP-2β, a splice variant of AP-2α, inhibits AP-2 activity. Besides subscribing to the AP-2 complex, AP-2α, AP-2β and AP-2γ proteins compose the OB2-1 transcription factor complex. OB2-1 specifically upregulates expression of the proto-oncogene c-ErbB-2, which is overexpressed in 25-30% of breast cancers. The gene encoding AP-2α maps to human chromosome 6p24. AP-2α may play an important role in the development of ectodermal-derived tissues. Deleterious mutations involving the AP-2α gene are linked to microphthalmia, corneal clouding and other anterior eye chamber defects. The ubiquitously expressed AP-4 transcription factor specifically binds to the DNA consensus sequence 5'-CAGCTG-3'. AP-4 interacts with promoters for immunoglobulin-κ gene families and simian virus 40. AP-4 may enhance the transcription of the human Huntington's disease gene. AP-4 is a helix-loop-helix protein that contains two distinctive leucine repeat elements.

CHROMOSOMAL LOCATION

Genetic locus: TFAP2B (human) mapping to 6p12.3; Tcfap2b (mouse) mapping to 1 A3.

SOURCE

AP-2β (H-87) is a rabbit polyclonal antibody raised against amino acids 130-216 of AP-2β 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8976 X, 200 µg/0.1 ml.

APPLICATIONS

AP-2β (H-87) is recommended for detection of AP-2β 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), 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).

AP-2β (H-87) is also recommended for detection of AP-2β in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for AP-2β siRNA (h): sc-37687, AP-2β siRNA (m): sc-37688, AP-2β shRNA Plasmid (h): sc-37687-SH, AP-2β shRNA Plasmid (m): sc-37688-SH, AP-2β shRNA (h) Lentiviral Particles: sc-37687-V and AP-2β shRNA (m) Lentiviral Particles: sc-37688-V.

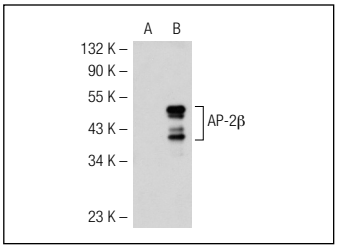
AP-2β (H-87) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of AP-2β: 47 kDa.

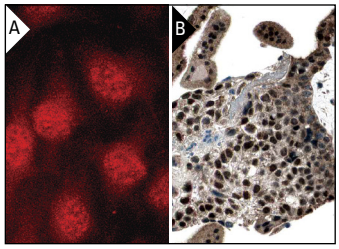
STORAGE

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

DATA



AP-2β (H-87): sc-8976. Western blot analysis of AP-2β expression in non-transfected: sc-117752 (**A**) and human AP-2β transfected: sc-113759 (**B**) 293T whole cell lysates.



AP-2β (H-87): sc-8976. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of trophoblastic cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Zhu, C.H., et al. 2001. A family of AP-2 proteins downregulate manganese superoxide dismutase expression. J. Biol. Chem. 276: 14407-14413.
2. Han, S., et al. 2009. Fish oil inhibits human lung carcinoma cell growth by suppressing integrin-linked kinase. Mol. Cancer Res. 7: 108-117.
3. Hu, S., et al. 2010. Research resource: genome-wide mapping of *in vivo* androgen receptor binding sites in mouse epididymis. Mol. Endocrinol. 24: 2392-2405.
4. Fuke, T., et al. 2010. Transcription factor AP-2β inhibits expression and secretion of leptin, an Insulin-sensitizing hormone, in 3T3-L1 adipocytes. Int. J. Obes. 34: 670-678.
5. Meng, X., et al. 2010. Transcription factor AP-2β: a negative regulator of IRS-1 gene expression. Biochem. Biophys. Res. Commun. 392: 526-532.
6. Biadasiewicz, K., et al. 2011. Transcription factor AP-2α promotes EGF-dependent invasion of human trophoblast. Endocrinology 152: 1458-1469.
7. Su, B., et al. 2011. Stage-associated dynamic activity profile of transcription factors in nasopharyngeal carcinoma progression based on protein/DNA array analysis. OMICS 15: 49-60.

RESEARCH USE

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