SANTA CRUZ BIOTECHNOLOGY, INC.

AP-2β (AP2b 1F3/8): sc-53160

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, and 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.

REFERENCES

1. Williams, T., Admon, A., Luscher, B. and Tjian, R. 1988. Cloning and expression of AP-2, a cell-type-specific transcription factor that activates inducible enhancer elements. Genes Dev. 2: 1557-1569.
2. Buettner, R., Kannan, P., Imhof, A., Bauer, R., Yim, S.O., Glockshuber, R., Van Dyke, M.W. and Tainsky, M.A. 1993. An alternatively spliced mRNA from the AP-2 gene encodes a negative regulator of transcriptional activation by AP-2. Mol. Cell. Biol. 13: 4174-4185.
3. Moser, M., Imhof, A., Pscherer, A., Bauer, R., Amselgruber, W., Sinowatz, F., Hofstadter, F., Schule, R. and Buettner, R. 1995. Cloning and characterization of a second AP-2 transcription factor: AP-2β. Development 121: 2779-2788.
4. Bosher, J.M., Totty, N.F., Hsuan, J.J., Williams, T. and Hurst, H.C. 1996. A family of AP-2 proteins regulates c-ErbB-2 expression in mammary carcinoma. Oncogene 13: 1701-1707.
5. Williamson, J.A., Bosher, J.M., Skinner, A., Sheer, D., Williams, T. and Hurst, H.C. 1996. Chromosomal mapping of the human and mouse homologues of two new members of the AP-2 family of transcription factors. Genomics 35: 262-264.

CHROMOSOMAL LOCATION

Genetic locus: TFAP2B (human) mapping to 6p12.3; Tfap2b (mouse) mapping to 1 A3.

SOURCE

AP-2β (AP2b 1F3/8) is a mouse monoclonal antibody raised against truncated AP-2β protein prepared from bacteria.

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.

APPLICATIONS

AP-2β (1F3/8) 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) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

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.

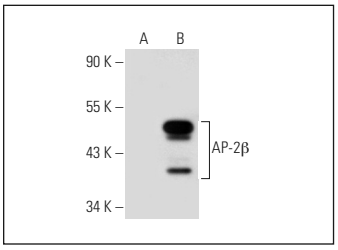
Molecular Weight of AP-2β: 47 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, AP-2β (h): 293T Lysate: sc-113759 or ZR-75-1 cell lysate: sc-2241.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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).

DATA



AP-2β (1F3/8): sc-53160. 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.

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 for detailed protocols and support products.