

AP-2 α (h): 293T Lysate: sc-113722

BACKGROUND

AP-2 transcription factor family members include AP-2 α , AP-2 β and AP-2 γ , 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-2 β , a splice variant of AP-2 α , inhibits AP-2 activity. Besides subscribing to the AP-2 complex, AP-2 α , AP-2 β and AP-2 γ 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. AP-2 α may play an important role in the development of ectodermal-derived tissues. Deleterious mutations involving the AP-2 α 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.

REFERENCES

- Williams, T., et al. 1988. Cloning and expression of AP-2, a cell-type-specific transcription factor that activates inducible enhancer elements. *Genes Dev.* 2: 1557-1569.
- Buettner, R., et al. 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.
- Moser, M., et al. 1995. Cloning and characterization of a second AP-2 transcription factor: AP-2 β . *Development* 121: 2779-2788.
- Bosher, J.M., et al. 1996. A family of AP-2 proteins regulates c-ErbB-2 expression in mammary carcinoma. *Oncogene* 13: 1701-1707.
- Williamson, J.A., et al. 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.
- McPherson, L.A., et al. 1997. Identification of ERF-1 as a member of the AP-2 transcription factor family. *Proc. Natl. Acad. Sci. USA* 94: 4342-4347.
- Moser, M., et al. 1997. Comparative analysis of AP-2 α and AP-2 β gene expression during murine embryogenesis. *Dev. Dyn.* 208: 115-124.
- Davies, A.F., et al. 1999. An interstitial deletion of 6p24-p25 proximal to the FKHL7 locus and including AP-2 α that affects anterior eye chamber development. *J. Med. Genet.* 36: 708-710.
- Motley, A.M., et al. 2006. Functional analysis of AP-2 α and μ 2 subunits. *Mol. Biol. Cell* 17: 5298-5308.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: TFAP2A (human) mapping to 6p24.3.

PRODUCT

AP-2 α (h): 293T Lysate represents a lysate of human AP-2 α transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

AP-2 α (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive AP-2 α antibodies. Recommended use: 10-20 μ l per lane.

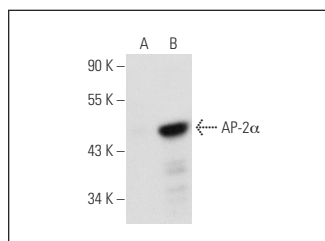
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

AP-2 α (3B5): sc-12726 is recommended as a positive control antibody for Western Blot analysis of enhanced human AP-2 α expression in AP-2 α transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



AP-2 α (3B5): sc-12726. Western blot analysis of AP-2 α expression in non-transfected: sc-117752 (A) and human AP-2 α transfected: sc-113722 (B) 293T whole cell lysates.

RESEARCH USE

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