SANTA CRUZ BIOTECHNOLOGY, INC.

AP-4 (B-3): sc-166024

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 6p24.3. 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.

REFERENCES

1. 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.
2. Hu, Y.F., et al. 1990. Transcription factor AP-4 contains multiple dimerization domains that regulate dimer specificity. Genes Dev. 4: 1741-1752.
3. Moser, M., et al. 1995. Cloning and characterization of a second AP-2 transcription factor: AP-2β. Development 121: 2779-2788.
4. Bosher, J.M., et al. 1996. A family of AP-2 proteins regulates c-ErbB-2 expression in mammary carcinoma. Oncogene 13: 1701-1707.
5. 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.

CHROMOSOMAL LOCATION

Genetic locus: TFAP4 (human) mapping to 16p13.3; Tfap4 (mouse) mapping to 16 A1.

SOURCE

AP-4 (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-43 at the N-terminus of AP-4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-166024 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-166024 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

AP-4 (B-3) is recommended for detection of AP-4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AP-4 (B-3) is also recommended for detection of AP-4 in additional species, including canine.

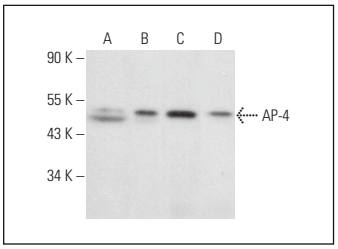
Suitable for use as control antibody for AP-4 siRNA (h): sc-37690, AP-4 siRNA (m): sc-37691, AP-4 shRNA Plasmid (h): sc-37690-SH, AP-4 shRNA Plasmid (m): sc-37691-SH, AP-4 shRNA (h) Lentiviral Particles: sc-37690-V and AP-4 shRNA (m) Lentiviral Particles: sc-37691-V.

AP-4 (B-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

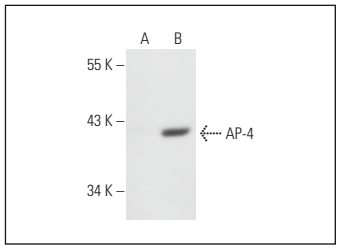
Molecular Weight of AP-4: 48 kDa.

Positive Controls: MOLT-4 nuclear extract: sc-2151, TK-1 whole cell lysate: sc-364798 or AP-4 (m): 293T Lysate: sc-118454.

DATA



AP-4 (B-3): sc-166024. Western blot analysis of AP-4 expression in Jurkat (**A**), MOLT-4 (**B**) and WEHI-231 (**C**) nuclear extracts and TK-1 whole cell lysate (**D**).



AP-4 (B-3): sc-166024. Western blot analysis of AP-4 expression in non-transfected: sc-117752 (**A**) and mouse AP-4 transfected: sc-118454 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Mushtaq, F., et al. 2019. miR-144 suppresses cell proliferation and invasion in gastric cancer through downregulation of activating enhancer-binding protein 4. Oncol. Lett. 17: 5686-5692.
2. Mbondji-Wonje, C., et al. 2020. Genetic variability of the U5 and downstream sequence of major HIV-1 subtypes and circulating recombinant forms. Sci. Rep. 10: 13214.

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.