SANTA CRUZ BIOTECHNOLOGY, INC.

AP-4 (N-17): sc-18593

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.

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. 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.

CHROMOSOMAL LOCATION

Genetic locus: TFAP4 (human) mapping to 16p13.3; Tcfap4 (mouse) mapping to 16 A1.

SOURCE

AP-4 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AP-4 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-18593 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-18593 X, 200 µg/0.1 ml.

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.

APPLICATIONS

AP-4 (N-17) is recommended for detection of AP-4 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

AP-4 (N-17) is also recommended for detection of AP-4 in additional species, including equine, canine and bovine.

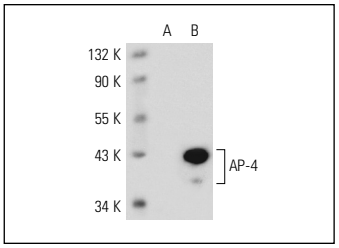
Suitable for use as control antibody for AP-4 siRNA (h): sc-37690, AP-4 siRNA (m): sc-37691, AP-4 shRNA Plasmid (h): sc-37690-SH, AP-4 shRNA Plasmid (m): sc-37691-SH, AP-4 shRNA (h) Lentiviral Particles: sc-37690-V and AP-4 shRNA (m) Lentiviral Particles: sc-37691-V.

AP-4 (N-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

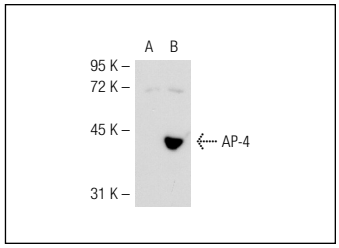
Molecular Weight of AP-4: 48 kDa.

Positive Controls: mouse liver extract: sc-2256, AP-4 (m): 293T Lysate: sc-118454 or AP-4 (h): 293 Lysate: sc-111027.

DATA



AP-4 (N-17): sc-18593. Western blot analysis of AP-4 expression in non-transfected: sc-110760 (**A**) and human AP-4 transfected: sc-111027 (**B**) 293 whole cell lysates.



AP-4 (N-17): sc-18593. 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. Ku, W.C., et al. 2009. Complementary quantitative proteomics reveals that transcription factor AP-4 mediates E-box-dependent complex formation for transcriptional repression of HDM2. Mol. Cell. Proteomics 8: 2034-2050.
2. Chew, Y.C., et al. 2011. PKCδ suppresses keratinocyte proliferation by increasing p21CIP1 level by a KLF4-dependent mechanism. J. Biol. Chem. 286: 28772-28782.
3. Chen, Y., et al. 2014. Myeloid zinc-finger 1 (MZF-1) suppresses prostate tumor growth through enforcing ferroportin-conducted iron egress. Oncogene. E-Published.