SANTA CRUZ BIOTECHNOLOGY, INC.

AP-2β (C-6): sc-390119

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

SOURCE

AP-2β (C-6) is a mouse monoclonal antibody raised against amino acids 130-216 of AP-2β 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-390119 X, 200 µg/0.1 ml.

AP-2β (C-6) is available conjugated to agarose (sc-390119 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390119 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390119 PE), fluorescein (sc-390119 FITC), Alexa Fluor® 488 (sc-390119 AF488), Alexa Fluor® 546 (sc-390119 AF546), Alexa Fluor® 594 (sc-390119 AF594) or Alexa Fluor® 647 (sc-390119 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390119 AF680) or Alexa Fluor® 790 (sc-390119 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

AP-2β (C-6) is recommended for detection of AP-2β 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-2β (C-6) is also recommended for detection of AP-2β in additional species, including equine, canine and bovine.

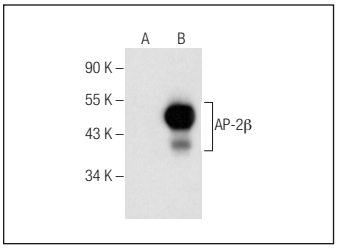
Suitable for use as control antibody for AP-2β siRNA (h): sc-37687, AP-2β siRNA (m): sc-37688, AP-2β shRNA Plasmid (h): sc-37687-SH, AP-2β shRNA Plasmid (m): sc-37688-SH, AP-2β shRNA (h) Lentiviral Particles: sc-37687-V and AP-2β shRNA (m) Lentiviral Particles: sc-37688-V.

AP-2β (C-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

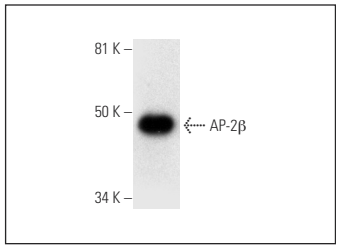
Molecular Weight of AP-2β: 47 kDa.

Positive Controls: AP-2β (h): 293T Lysate: sc-113759, ZR-75-1 cell lysate: sc-2241 or A-431 whole cell lysate: sc-2201.

DATA



AP-2β (C-6): sc-390119. 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 (C-6): sc-390119. Western blot analysis of AP-2β expression in ZR-75-1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chen, L., et al. 2017. Transcriptomes of major renal collecting duct cell types in mouse identified by single-cell RNA-seq. Proc. Natl. Acad. Sci. USA 114: E9989-E9998.
2. Bhattacharya, D., et al. 2020. Metabolic reprogramming promotes neural crest migration via Yap/Tead signaling. Dev. Cell 53: 199-211.e6.
3. Sanchez-Ferras, O., et al. 2021. A coordinated progression of progenitor cell states initiates urinary tract development. Nat. Commun. 12: 2627.
4. Azambuja, A.P., et al. 2021. The connectome of neural crest enhancers reveals regulatory features of signaling systems. Dev. Cell 56: 1268-1282.e6.

STORAGE

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