

AP-2 β (C-6): sc-390119

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 CCCAGGC 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.

CHROMOSOMAL LOCATION

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

SOURCE

AP-2 β (C-6) is a mouse monoclonal antibody raised against amino acids 130-216 of AP-2 β of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ , 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 μ g/0.1 ml.

AP-2 β (C-6) is available conjugated to agarose (sc-390119 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390119 HRP), 200 μ g/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 μ g/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 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

AP-2 β (C-6) is recommended for detection of AP-2 β of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-2 β (C-6) is also recommended for detection of AP-2 β in additional species, including equine, canine and bovine.

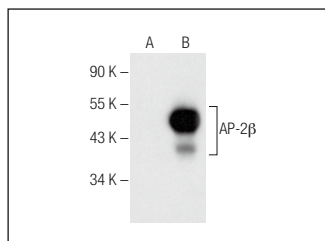
Suitable for use as control antibody for AP-2 β siRNA (h): sc-37687, AP-2 β siRNA (m): sc-37688, AP-2 β shRNA Plasmid (h): sc-37687-SH, AP-2 β shRNA Plasmid (m): sc-37688-SH, AP-2 β shRNA (h) Lentiviral Particles: sc-37687-V and AP-2 β shRNA (m) Lentiviral Particles: sc-37688-V.

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

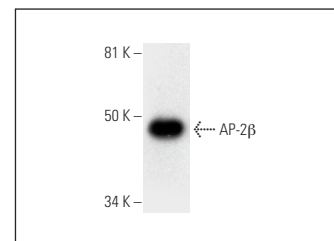
Molecular Weight of AP-2 β : 47 kDa.

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

DATA



AP-2 β (C-6): sc-390119. Western blot analysis of AP-2 β expression in non-transfected: sc-117752 (A) and human AP-2 β transfected: sc-113759 (B) 293T whole cell lysates.



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

SELECT PRODUCT CITATIONS

- 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.
- Bhattacharya, D., et al. 2020. Metabolic reprogramming promotes neural crest migration via Yap/Tea signaling. *Dev. Cell* 53: 199-211.e6.
- Sanchez-Ferras, O., et al. 2021. A coordinated progression of progenitor cell states initiates urinary tract development. *Nat. Commun.* 12: 2627.
- Merkuri, F., et al. 2024. Histone lactylation couples cellular metabolism with developmental gene regulatory networks. *Nat. Commun.* 15: 90.

STORAGE

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