

# AP-2 $\gamma$ (B-9): sc-377458

## BACKGROUND

AP-2 transcription factor family members include AP-2 $\alpha$ , AP-2 $\beta$  and AP-2 $\gamma$ , 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 $\beta$ , a splice variant of AP-2 $\alpha$ , inhibits AP-2 activity. Besides subscribing to the AP-2 complex, AP-2 $\alpha$ , AP-2 $\beta$  and AP-2 $\gamma$  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 $\alpha$  may play an important role in the development of ectodermal-derived tissues. Deleterious mutations involving the AP-2 $\alpha$  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- $\kappa$  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 $\beta$ . *Development* 121: 2779-2788.
- 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: TFAP2C (human) mapping to 20q13.31; Tfp2c (mouse) mapping to 2 H3.

## SOURCE

AP-2 $\gamma$  (B-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 183-219 within an internal region of AP-2 $\gamma$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g 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-377458 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-377458 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## STORAGE

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

## APPLICATIONS

AP-2 $\gamma$  (B-9) is recommended for detection of AP-2 $\gamma$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

Suitable for use as control antibody for AP-2 $\gamma$  siRNA (h): sc-29696, AP-2 $\gamma$  siRNA (m): sc-37689, AP-2 $\gamma$  shRNA Plasmid (h): sc-29696-SH, AP-2 $\gamma$  shRNA Plasmid (m): sc-37689-SH, AP-2 $\gamma$  shRNA (h) Lentiviral Particles: sc-29696-V and AP-2 $\gamma$  shRNA (m) Lentiviral Particles: sc-37689-V.

AP-2 $\gamma$  (B-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

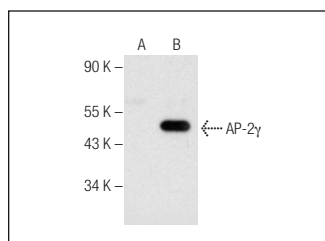
Molecular Weight of AP-2 $\gamma$ : 48 kDa.

Positive Controls: AP-2 $\gamma$  (h2): 293T Lysate: sc-116386, MDA-MB-231 cell lysate: sc-2232 or HeLa whole cell lysate: sc-2200.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



AP-2 $\gamma$  (B-9): sc-377458. Western blot analysis of AP-2 $\gamma$  expression in non-transfected: sc-117752 (A) and human AP-2 $\gamma$  transfected: sc-116386 (B) 293T whole cell lysates.

## RESEARCH USE

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

## CONJUGATES

See **AP-2 $\gamma$  (6E4/4): sc-12762** for AP-2 $\gamma$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.