

# AP-2 $\alpha$ (B-11): sc-55485

## 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. The gene encoding AP-2 $\alpha$  maps to human chromosome 6p24.3. 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.

## CHROMOSOMAL LOCATION

Genetic locus: TFAP2A (human) mapping to 6p24.3; Tcfap2a (mouse) mapping to 13 A3.3.

## SOURCE

AP-2 $\alpha$  (B-11) is a mouse monoclonal antibody raised against amino acids 130-209 of AP-2 $\alpha$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

AP-2 $\alpha$  (B-11) is recommended for detection of AP-2 $\alpha$  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), immunohistochemistry (including paraffin-embedded sections) (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 $\alpha$  siRNA (h): sc-105074, AP-2 $\alpha$  siRNA (m): sc-29697, AP-2 $\alpha$  shRNA Plasmid (h): sc-105074-SH, AP-2 $\alpha$  shRNA Plasmid (m): sc-29697-SH, AP-2 $\alpha$  shRNA (h) Lentiviral Particles: sc-105074-V and AP-2 $\alpha$  shRNA (m) Lentiviral Particles: sc-29697-V.

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

Positive Controls: AP-2 $\alpha$  (m): 293T Lysate: sc-118446, HeLa nuclear extract: sc-2120 or HeLa whole cell lysate: sc-2200.

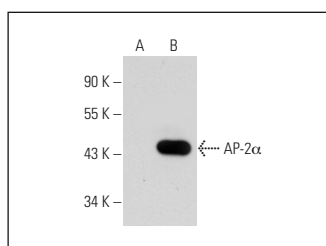
## STORAGE

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

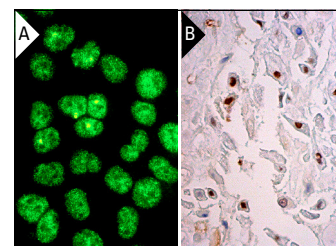
## RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto A Blocking Reagent: sc-2333 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 $\alpha$  (B-11): sc-55485. Western blot analysis of AP-2 $\alpha$  expression in non-transfected: sc-117752 (A) and mouse AP-2 $\alpha$  transfected: sc-118446 (B) 293T whole cell lysates.



AP-2 $\alpha$  (B-11): sc-55485. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of decidual cells (B).

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **AP-2 $\alpha$  (3B5): sc-12726** for AP-2 $\alpha$  antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.