

AP-2 α (H-79): sc-8975

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 CCCCAGGC 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. The gene encoding AP-2 α maps to human chromosome 6p24.3. 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.

CHROMOSOMAL LOCATION

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

SOURCE

AP-2 α (H-79) is a rabbit polyclonal antibody raised against amino acids 130-209 mapping within an internal region of AP-2 α of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8975 X, 200 μ g/0.1 ml.

APPLICATIONS

AP-2 α (H-79) is recommended for detection of AP-2 α of mouse, rat, human and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, 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 α (H-79) is also recommended for detection of AP-2 α in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AP-2 α siRNA (h): sc-105074, AP-2 α siRNA (m): sc-29697, AP-2 α shRNA Plasmid (h): sc-105074-SH, AP-2 α shRNA Plasmid (m): sc-29697-SH, AP-2 α shRNA (h) Lentiviral Particles: sc-105074-V and AP-2 α shRNA (m) Lentiviral Particles: sc-29697-V.

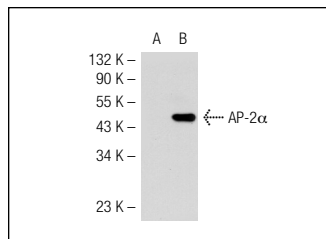
Molecular Weight of AP-2 α : 48 kDa.

Positive Controls: AP-2 α (m): 293T Lysate: sc-118446, ZR-75-1 cell lysate: sc-2241 or HeLa whole cell lysate: sc-2200.

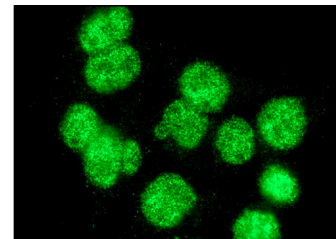
STORAGE

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

DATA



AP-2 α (H-79): sc-8975. Western blot analysis of AP-2 α expression in non-transfected: sc-117752 (A) and mouse AP-2 α transfected: sc-118446 (B) 293T whole cell lysates.



AP-2 α (H-79): sc-8975. Nuclear immunofluorescence staining of methanol-fixed HeLa cells showing nuclear staining.

SELECT PRODUCT CITATIONS

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- Stabach, P.R., et al. 2006. AP2 α alters the transcriptional activity and stability of p53. *Oncogene* 25: 2148-2159.
- Paonessa, F., et al. 2006. Activator protein-2 overexpression accounts for increased Insulin receptor expression in human breast cancer. *Cancer Res.* 66: 5085-5093.
- Iwamoto, N., et al. 2007. ATP-binding cassette transporter A1 gene transcription is downregulated by activator protein 2 α . Doxazosin inhibits activator protein 2 α and increases high-density lipoprotein biogenesis independent of α 1-adrenoceptor blockade. *Circ. Res.* 101: 156-165.
- Park, S.W., et al. 2008. Epigenetic regulation of κ opioid receptor gene in neuronal differentiation. *Neuroscience* 151: 1034-1041.
- Costa, V., et al. 2008. The Insulin receptor: a new anticancer target for peroxisome proliferator-activated receptor- γ (PPAR γ) and thiazolidine-dione-PPAR γ agonists. *Endocr. Relat. Cancer* 15: 325-335.
- Pujal, J., et al. 2009. Keratin 7 promoter selectively targets transgene expression to normal and neoplastic pancreatic ductal cells *in vitro* and *in vivo*. *FASEB J.* 23: 1366-1375.
- Do, T.N., et al. 2010. An intronic polymorphism of IRF4 gene influences gene transcription *in vitro* and shows a risk association with childhood acute lymphoblastic leukemia in males. *Biochim. Biophys. Acta* 1802: 292-300.
- Chen, C., et al. 2012. Modulation of IFN- γ receptor 1 expression by AP-2 α influences IFN- γ sensitivity of cancer cells. *Am. J. Pathol.* 180: 661-671.

RESEARCH USE

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