SANTA CRUZ BIOTECHNOLOGY, INC.

AP-2γ (AP2g 6E4/4): sc-53162

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 eRF1, 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. The gene encoding AP-2α maps to human chromosome 6p24. 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.
3. Moser, M., et al. 1995. Cloning and characterization of a second AP-2 transcription factor: AP-2β. Development 121: 2779-2788.
4. Bosher, J.M., et al. 1996. A family of AP-2 proteins regulates c-ErbB-2 expression in mammary carcinoma. Oncogene 13: 1701-1707.
5. 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; Tcfap2c (mouse) mapping to 2 H3.

SOURCE

AP-2γ (AP2g 6E4/4) is a mouse monoclonal antibody raised against bacterial AP-2α/AP-2γ fusion protein 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.

STORAGE

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

APPLICATIONS

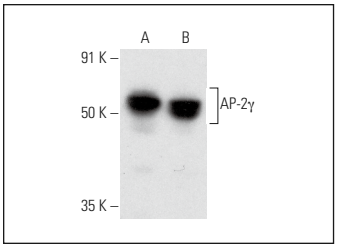
AP-2γ (AP2g 6E4/4) is recommended for detection of AP-2γ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

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

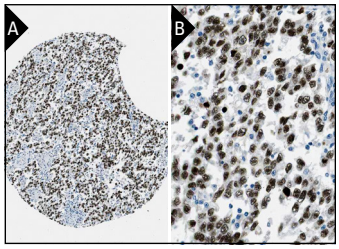
Molecular Weight of AP-2γ: 48 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, SK-BR-3 cell lysate: sc-2218 or HeLa whole cell lysate: sc-2200.

DATA



AP-2γ (AP2g 6E4/4): sc-53162. Western blot analysis of AP-2γ expression in MCF7 (**A**) and SK-BR-3 (**B**) whole cell lysates.



AP-2γ (AP2g 6E4/4): sc-53162. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis cancer tissue showing nuclear staining of tumor cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Scibetta, A.G., et al. 2010. Dual association by TFAP2A during activation of the $p21^{cip/CDKN1A}$ promoter. Cell Cycle 9: 4525-4532.
2. Wong, P.P., et al. 2012. Histone demethylase KDM5B collaborates with TFAP2C and Myc to repress the cell cycle inhibitor $p21^{cip/CDKN1A}$. Mol. Cell. Biol. 32: 1633-1644.
3. Zhang, J., et al. 2018. OTX2 restricts entry to the mouse germline. Nature 562: 595-599.
4. Gao, Y., et al. 2020. Acetylation of histone H3K27 signals the transcriptional elongation for estrogen receptor α. Commun. Biol. 3: 165.
5. Di Giovannantonio, L.G., et al. 2021. Direct repression of Nanog and Oct4 by OTX2 modulates the contribution of epiblast-derived cells to germline and somatic lineage. Development 148: dev199166.

RESEARCH USE

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