

AP-2 γ (6E4/4): sc-12762

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 eRF1, 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. 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.

SELECT PRODUCT CITATIONS

- 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: TFAP2C (human) mapping to 20q13.31; Tfap2c (mouse) mapping to 2 H3.

SOURCE

AP-2 γ (6E4/4) is a mouse monoclonal antibody raised against bacterially produced AP-2 protein and specifically recognizes the C terminus of AP-2 γ .

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-12762 X, 200 μ g/0.1 ml.

AP-2 γ (6E4/4) is available conjugated to agarose (sc-12762 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-12762 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-12762 PE), fluorescein (sc-12762 FITC), Alexa Fluor[®] 488 (sc-12762 AF488), Alexa Fluor[®] 546 (sc-12762 AF546), Alexa Fluor[®] 594 (sc-12762 AF594) or Alexa Fluor[®] 647 (sc-12762 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-12762 AF680) or Alexa Fluor[®] 790 (sc-12762 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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 γ (6E4/4) is recommended for detection of AP-2 γ mouse, rat and human 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

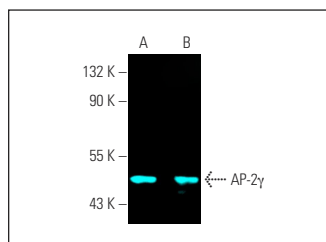
Suitable for use as control antibody for AP-2 γ siRNA (h): sc-29696, AP-2 γ siRNA (m): sc-37689, AP-2 γ shRNA Plasmid (h): sc-29696-SH, AP-2 γ shRNA Plasmid (m): sc-37689-SH, AP-2 γ shRNA (h) Lentiviral Particles: sc-29696-V and AP-2 γ shRNA (m) Lentiviral Particles: sc-37689-V.

AP-2 γ (6E4/4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

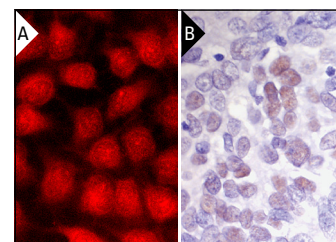
Molecular Weight of AP-2 γ : 48 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, MCF7 whole cell lysate: sc-2206 or MDA-MB-231 cell lysate: sc-2232.

DATA



AP-2 γ (6E4/4) Alexa Fluor[®] 647: sc-12762 AF647. Direct fluorescent western blot analysis of AP-2 γ expression in MCF7 (A) and SK-BR-3 (B) whole cell lysates. Blocked with UltraCruz[®] Blocking Reagent: sc-516214.



AP-2 γ (6E4/4): sc-12762. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tumor showing nuclear staining (B).

SELECT PRODUCT CITATIONS

- Nyormoi, O., et al. 2001. Transcription factor AP-2 α is preferentially cleaved by caspase 6 and degraded by proteasome during tumor necrosis factor α -induced apoptosis in breast cancer cells. *Mol. Cell. Biol.* 21: 4856-4867.
- Lu, X., et al. 2023. Single-cell multi-omics analysis of human testicular germ cell tumor reveals its molecular features and microenvironment. *Nat. Commun.* 14: 8462.
- Xiao, Z., et al. 2024. 3D reconstruction of a gastrulating human embryo. *Cell* 187: 2855-2874.e19.
- Jaiswal, S.K., et al. 2025. The Megacomplex protects ER- α from degradation by Fulvestrant in epithelial ovarian cancer. *Cancer Lett.* 608: 217129.

RESEARCH USE

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

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