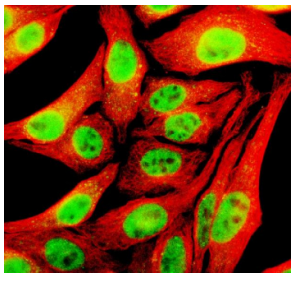
TFAP4 Antibody / Transcription factor AP-4 (FY13050)

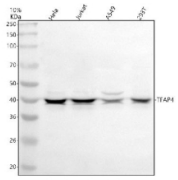
Catalog No.	Formulation	Size
FY13050	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

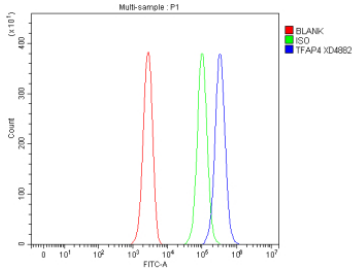
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q01664
Localization	Nuclear
Applications	Western Blot: 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This TFAP4 antibody is available for research use only.



Immunofluorescent staining of TFAP4 using anti-TFAP4 antibody (green) and anti-Beta Tubulin antibody (red). TFAP4 was detected in an immunocytochemical section of Hela cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-TFAP4 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of TFAP4 using anti-TFAP4 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human whole cell lysates, Lane 4: human 293T whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-TFAP4 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected molecular weight of TFAP4 is ~39 kDa.



Flow Cytometry analysis of Jurkat cells using anti-TFAP4 antibody. Overlay histogram showing Jurkat cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-TFAP4 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

TFAP4 antibody detects Transcription factor AP-4, a basic helix-loop-helix leucine zipper (bHLH-LZ) transcription factor that regulates cell proliferation, differentiation, and apoptosis. The UniProt recommended name is Transcription factor AP-4 (TFAP4). This protein binds to E-box DNA motifs (CAGCTG) to modulate gene expression involved in developmental signaling and oncogenic transformation.

Functionally, TFAP4 antibody identifies a 338-amino-acid nuclear transcription factor that acts as both an activator and repressor of transcription. TFAP4 dimerizes through its leucine zipper domain and binds to specific promoter sequences, influencing the expression of genes controlling cell cycle progression, epithelial-to-mesenchymal transition (EMT), and differentiation. It regulates genes such as MYC, CDKN1A (p21), and CCND1, linking growth control to transcriptional responses.

The TFAP4 gene is located on chromosome 16p13.3 and is broadly expressed in epithelial and immune cells. TFAP4 functions downstream of MYC as a key mediator of its transcriptional program. In oncogenesis, TFAP4 promotes proliferation, invasion, and metastasis by activating EMT-related transcription factors such as SNAIL and repressing cell adhesion molecules like E-cadherin. Conversely, under stress conditions, TFAP4 can trigger apoptotic pathways through p53-dependent transcriptional activation.

TFAP4 also participates in development by regulating neuronal and epithelial differentiation. Its activity is modulated by post-translational modifications including phosphorylation and acetylation, which influence its DNA-binding affinity and cofactor recruitment. Dysregulation of TFAP4 expression has been linked to various cancers, including colorectal, breast, and gastric cancer, where it drives metastasis and stem-like phenotypes.

TFAP4 antibody is widely used in transcriptional regulation, cancer biology, and developmental studies. It is suitable for western blotting, immunohistochemistry, and chromatin immunoprecipitation to detect TFAP4 protein levels and promoter occupancy. This antibody supports investigations into MYC signaling, cell cycle regulation, and transcriptional reprogramming. In oncology, TFAP4 detection provides insights into tumor progression and epithelial plasticity.

Structurally, TFAP4 contains a bHLH-LZ domain for DNA binding and dimerization, along with transactivation and repression regions that recruit chromatin-modifying complexes. NSJ Bioreagents provides TFAP4 antibody reagents

validated for use in transcriptional control, oncogenic signaling, and developmental regulation research.

Application Notes

Optimal dilution of the TFAP4 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TFAP4 recombinant protein (Position: M1-K299) was used as the immunogen for the TFAP4 antibody.

Storage

After reconstitution, the TFAP4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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