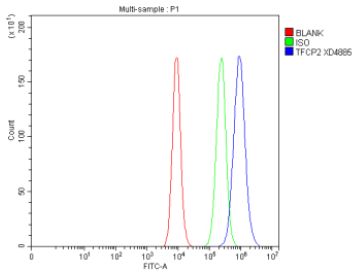
TFCP2 Antibody / Transcription factor CP2 (FY12147)

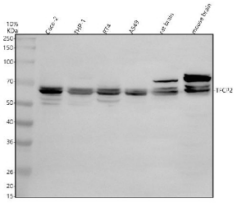
Catalog No.	Formulation	Size
FY12147	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
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	Q12800
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This TFCP2 antibody is available for research use only.



Flow Cytometry analysis of Caco-2 cells using anti-TFCP2 antibody. Overlay histogram showing Caco-2 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-TFCP2 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.



Western blot analysis of TFCP2 using anti-TFCP2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Caco-2 whole cell lysates, Lane 2: human THP-1 whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: human whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: mouse brain tissue 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-TFCP2 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 band size for TFCP2 is at 57 kDa. It is commonly observed at 57-65 kDa, possibly showing multiple bands reflecting different phosphorylation states. A slightly larger hyperphosphorylated form may be observed in rodent samples.

Description

TFCP2 antibody detects Transcription factor CP2, encoded by the TFCP2 gene on chromosome 12q13.12. TFCP2 antibody is used to study this ubiquitously expressed transcriptional regulator, also known as Late SV40 factor (LSF). TFCP2 controls gene expression by binding to CCAAT and GT-box elements in target promoters. It regulates structural genes, cytokines, and enzymes essential for development, hematopoiesis, and immune function. Its versatility stems from its ability to function as either an activator or repressor depending on the cellular context and partner proteins.

Structurally, TFCP2 contains DNA-binding and dimerization domains that enable it to form homo- and heterodimers with related proteins such as TFCP2L1. These dimeric complexes increase its DNA-binding specificity and extend its regulatory range. In addition, TFCP2 includes transactivation and repression domains that recruit co-activators like p300 or co-repressors such as HDACs, integrating diverse signaling inputs at gene promoters. Its modular structure makes TFCP2 a flexible regulator of transcriptional programs.

Functionally, TFCP2 is central to multiple biological processes. In hematopoiesis, it regulates globin gene expression and influences erythroid differentiation. In immune cells, it modulates cytokine expression, including interleukin-4 and interleukin-17, affecting immune responses and inflammation. TFCP2 also contributes to hepatic metabolism and developmental processes. Dysregulation of TFCP2 impacts immune tolerance, inflammation, and developmental outcomes. Researchers apply TFCP2 antibody to study these regulatory mechanisms in health and disease.

Clinically, TFCP2 is implicated in oncogenesis. Overexpression has been observed in osteosarcoma, hepatocellular carcinoma, and other cancers, where it promotes cell survival and resistance to apoptosis. TFCP2 gene fusions have been identified in sarcomas, further supporting its oncogenic potential. Beyond cancer, TFCP2 is associated with cardiovascular and metabolic disorders. It regulates endothelial genes that influence vascular integrity and lipid metabolism. Its dysregulation has been linked to atherosclerosis, insulin resistance, and anemia. These findings highlight TFCP2's broad impact on physiology and pathology.

Experimentally, TFCP2 antibody is used in western blotting to detect the ~60 kDa protein, in immunohistochemistry to examine tissue expression, and in chromatin immunoprecipitation to map binding sites across the genome. Co-immunoprecipitation with TFCP2 antibody helps identify interacting partners, clarifying its role in transcriptional networks. NSJ Bioreagents provides TFCP2 antibody to support research in cancer biology, transcriptional control, and immune regulation.

Application Notes

Optimal dilution of the TFCP2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human TFCP2 recombinant protein (Position: Q331-K502) was used as the immunogen for the TFCP2 antibody.

Storage

After reconstitution, the TFCP2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.