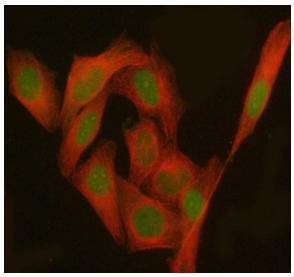
JADE1 Antibody / Jade family PHD finger protein 1 / PHF17 (FY13383)

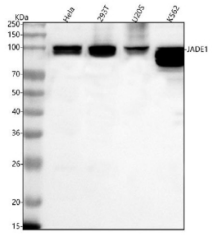
Catalog No.	Formulation	Size
FY13383	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

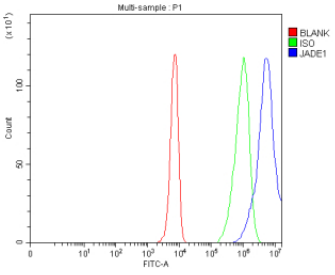
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q6IE81
Localization	Nuclear, cytoplasmic
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This JADE1 antibody is available for research use only.



Immunofluorescent staining of PHF17/JADE1 using anti-JADE1 antibody (green) and anti-Beta Tubulin antibody (red). JADE1 was detected in immunocytochemical section of human 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-JADE1 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 PHF17/JADE1 using anti-JADE1 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: human U2OS whole cell lysates, Lane 4: human K562 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-JADE1 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 enhanced chemiluminescent. A specific band was detected for PHF17/JADE1 at approximately 96 kDa. The expected molecular weight of PHF17/JADE1 is at 96 kDa.



Flow Cytometry analysis of human K562 cells using anti-JADE1 antibody. Overlay histogram showing K562 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-JADE1 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 (Red line) was also used as a control.

Description

JADE1 antibody detects Jade family PHD finger protein 1, a chromatin-associated transcriptional regulator encoded by the JADE1 gene on chromosome 4q28.2. JADE1 belongs to the JADE protein family and plays critical roles in histone acetylation, gene expression, and renal epithelial cell differentiation. It functions as a component of the HBO1 (histone acetyltransferase binding to ORC1) complex, which acetylates histones H4 and H2A to promote chromatin remodeling and transcriptional activation. JADE1 is expressed in kidney, liver, and epithelial tissues, with strong enrichment in renal tubular cells where it supports differentiation and polarity maintenance.

Structurally, JADE1 contains two PHD (plant homeodomain) zinc finger motifs, an N-terminal coiled-coil domain, and a C-terminal PEST sequence important for protein stability. These domains facilitate chromatin binding and complex formation with HBO1, ING4, and BRPF family proteins. JADE1 belongs to the chromatin-modifying family of histone acetylation regulators that modulate epigenetic transcriptional control. Co-localization studies show JADE1 primarily localized to the nucleus, especially at transcriptionally active chromatin regions.

Functionally, JADE1 promotes histone acetylation and chromatin accessibility, facilitating the expression of genes involved in cell cycle regulation, epithelial morphogenesis, and DNA repair. It stabilizes the HBO1 complex and coordinates acetyltransferase activity at replication origins and promoters. In kidney epithelial cells, JADE1 regulates Wnt and TGF-beta pathways to maintain differentiation and suppress epithelial-to-mesenchymal transition (EMT). JADE1 also interacts with von Hippel-Lindau (VHL) tumor suppressor protein, enhancing the degradation of oncoproteins such as beta-catenin and cyclin E, linking it to tumor suppression mechanisms.

Loss or mutation of JADE1 disrupts chromatin organization and promotes tumorigenesis, particularly in renal cell carcinoma and hepatocellular carcinoma. Reduced JADE1 levels correlate with increased proliferation and dedifferentiation of epithelial cells. Pathway associations include histone acetylation, transcriptional regulation, and Wnt signaling. During development, JADE1 expression supports epithelial lineage specification and organogenesis. Known binding partners include HBO1, ING4, BRPF3, and VHL, forming multi-protein chromatin remodeling assemblies.

The JADE1 antibody from NSJ Bioreagents is an excellent reagent for studying chromatin regulation, epithelial differentiation, and tumor suppression mechanisms.

Application Notes

Optimal dilution of the JADE1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PHF17/JADE1 recombinant protein (Position: I93-D811) was used as the immunogen for the JADE1 antibody.

Storage

After reconstitution, the JADE1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.