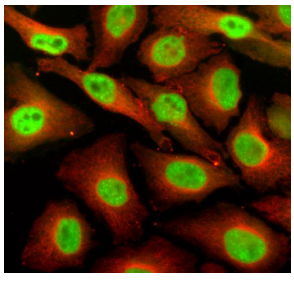
SUPT16H Antibody / Suppressor of Ty 16 (FY12526)

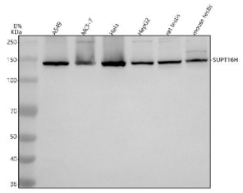
Catalog No.	Formulation	Size
FY12526	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

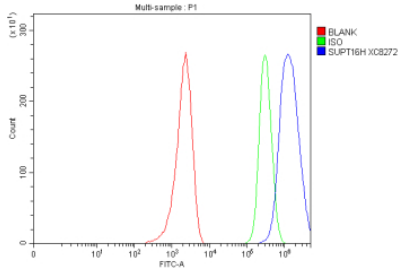
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9Y5B9
Localization	Nuclear
Applications	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 SUPT16H antibody is available for research use only.



Immunofluorescent staining of SUPT16H using anti-SUPT16H antibody (green) and anti-Beta Tubulin antibody (red). SUPT16H 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-SUPT16H 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 SUPT16H using anti-SUPT16H antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: mouse testis 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-SUPT16H 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. SUPT16H (~120 kDa predicted) was detected at ~140 kDa across multiple lysates, consistent with the known anomalous migration of phosphorylated SPT16 caused by its acidic C-terminal domain and extensive post-translational modification.



Flow Cytometry analysis of MCF-7 cells using anti-SUPT16H antibody. Overlay histogram showing MCF-7 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-SUPT16H 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

SUPT16H antibody detects Suppressor of Ty 16 homolog, a chromatin-associated protein that forms part of the FACT (facilitates chromatin transcription) complex. Together with SSRP1, SUPT16H reorganizes nucleosomes during transcription, replication, and DNA repair. The SUPT16H antibody is frequently used in chromatin biology and gene-expression studies to examine histone dynamics and transcriptional regulation.

SUPT16H is encoded by the SUPT16H gene located on human chromosome 14q11.2. The protein is approximately 120 kilodaltons and consists of an N-terminal dimerization domain, a middle domain that binds histones H2A-H2B, and a C-terminal acidic region responsible for interactions with RNA polymerase II and other transcriptional regulators. Through its role in nucleosome disassembly and reassembly, SUPT16H maintains chromatin integrity during active transcription.

A SUPT16H antibody detects a 120 kilodalton band in western blot assays and demonstrates strong nuclear localization by immunofluorescence. FACT complex activity is essential for the passage of polymerases through chromatin and the preservation of epigenetic marks. SUPT16H regulates promoter accessibility and prevents inappropriate histone eviction, balancing gene activation with chromatin stability.

Altered SUPT16H function affects transcription elongation, replication stress response, and genome maintenance. Viral proteins such as HIV Tat exploit FACT to facilitate viral transcription, while suppression of SUPT16H reduces viral replication. Overexpression is observed in several cancers, where it supports rapid proliferation by maintaining chromatin fluidity and preventing DNA damage-induced senescence.

Because of its pivotal role in chromatin dynamics, SUPT16H serves as a potential target for cancer therapy and antiviral drug development. NSJ Bioreagents provides a validated SUPT16H antibody for its applications, supporting research into transcriptional control, epigenetic remodeling, and genome integrity.

Application Notes

Optimal dilution of the SUPT16H antibody should be determined by the researcher.

Immunogen

E.coli-derived human SUPT16H recombinant protein (Position: M1-E926) was used as the immunogen for the SUPT16H antibody.

Storage

After reconstitution, the SUPT16H 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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