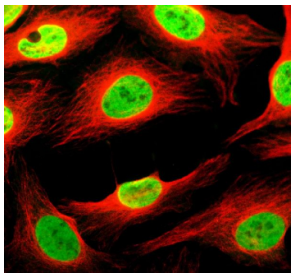
THYN1 Antibody / Thymocyte nuclear protein 1 (FY12881)

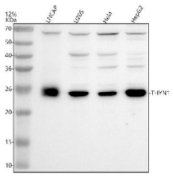
Catalog No.	Formulation	Size
FY12881	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

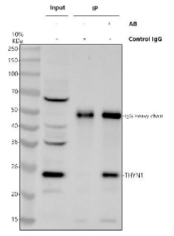
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9P016
Localization	Nuclear
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml Immunoprecipitation : 2-4ug/500ug of lysate Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This THYN1 antibody is available for research use only.



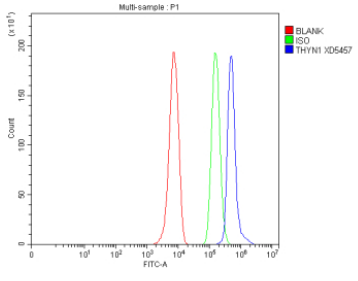
Immunofluorescent staining of THYN1 using anti-THYN1 antibody (green) and anti-Alpha Tubulin antibody (red). THYN1 was detected in an immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-THYN1 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 THYN1 using anti-THYN1 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human LNCAP whole cell lysates, Lane 2: human U2OS whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: human HepG2 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-THYN1 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. A specific band was detected for THYN1 at approximately 26 kDa. The expected molecular weight of THYN1 is ~26 kDa.



Immunoprecipitating THYN1 in Hela whole cell lysate. Western blot analysis of THYN1 using anti-THYN1 antibody. Lane 1: Hela whole cell lysates (30ug), Lane 2: Rabbit control IgG instead of anti-THYN1 antibody in Hela whole cell lysate, Lane 3: anti-THYN1 antibody (2ug) + Hela whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-THYN1 antibody at a dilution of 0.5 ug/ml and probed with a goat anti-rabbit IgG-HRP secondary antibody. The signal is developed using ECL Plus Western Blotting Substrate. A specific band was detected for THYN1 at approximately 26 kDa. The expected molecular weight of THYN1 is at 26 kDa.



Flow Cytometry analysis of HepG2 cells using anti-THYN1 antibody. Overlay histogram showing HepG2 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-THYN1 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

THYN1 antibody detects Thymocyte nuclear protein 1, a nuclear DNA-binding protein that plays a role in apoptosis regulation, lymphocyte differentiation, and chromatin organization. Encoded by the THYN1 gene on chromosome 11q25, this evolutionarily conserved protein is predominantly expressed in thymocytes and lymphoid tissues, where it contributes to T-cell maturation and apoptotic signaling. THYN1 is also found in other proliferative cell types, indicating a broader role in cell cycle regulation and genomic stability.

Structurally, Thymocyte nuclear protein 1 is a 225-amino-acid protein of approximately 26 kilodaltons that localizes to the nucleus. It contains multiple lysine and arginine-rich regions that facilitate DNA interaction and chromatin association, as well as nuclear localization sequences that ensure retention within the nucleus. Its precise molecular function remains under study, but evidence suggests that THYN1 participates in apoptotic chromatin condensation and transcriptional control during cell stress and differentiation.

The THYN1 antibody is widely used in immunology, apoptosis, and hematopoiesis research to study nuclear regulation of T-cell development and programmed cell death. Western blot analysis detects a band at approximately 28 kilodaltons corresponding to THYN1, while immunofluorescence demonstrates nuclear punctate staining consistent with chromatin association. This antibody is a valuable tool for understanding nuclear protein dynamics in immune cell differentiation and apoptosis signaling.

Functionally, THYN1 has been linked to regulation of the apoptotic pathway through interactions with caspase-dependent DNA fragmentation processes. Its expression is highest in thymocytes undergoing negative selection, suggesting a role in eliminating autoreactive T-cells. Beyond immune regulation, THYN1 may contribute to chromatin remodeling and transcriptional repression during stress-induced cell cycle arrest. Dysregulation of THYN1 has been associated with cancer cell survival and abnormal immune function, underscoring its potential role in tumor immunology and apoptosis resistance. The THYN1 antibody supports investigations into nuclear apoptosis mechanisms and T-cell homeostasis. NSJ Bioreagents provides this antibody validated for its applications, ensuring consistent performance in nuclear and immune biology research.

Application Notes

Optimal dilution of the THYN1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human THYN1 recombinant protein (Position: M1-S225) was used as the immunogen for the THYN1 antibody.

Storage

After reconstitution, the THYN1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.