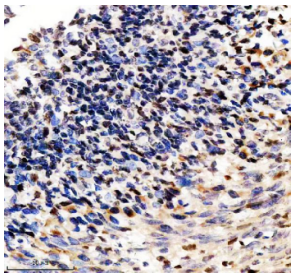
SP110 Antibody / SP110 nuclear body protein (FY13102)

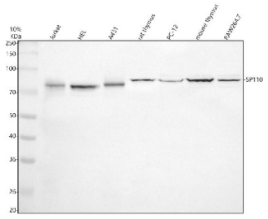
Catalog No.	Formulation	Size
FY13102	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

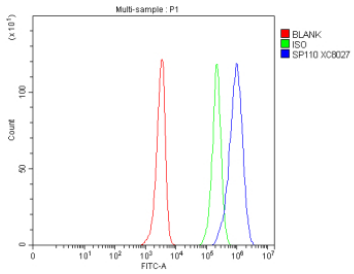
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9HB58
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SP110 antibody is available for research use only.



Immunohistochemical staining of SP110 using anti-SP110 antibody. SP110 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SP110 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Western blot analysis of SP110 using anti-SP110 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Jurkat whole cell lysates, Lane 2: human HEL whole cell lysates, Lane 3: human whole cell lysates, Lane 4: rat thymus tissue lysates, Lane 5: rat PC-12 whole cell lysates, Lane 6: mouse thymus tissue lysates, Lane 7: mouse RAW264.7 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-SP110 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 SP110 is ~78 kDa.



Flow Cytometry analysis of human HEL cells using anti-SP110 antibody. Overlay histogram showing HEL 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-SP110 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

SP110 antibody detects SP110 nuclear body protein, a transcriptional coactivator and nuclear body component involved in immune response regulation and chromatin organization. The UniProt recommended name is SP110 nuclear body protein (SP110). This nuclear protein functions as part of the promyelocytic leukemia (PML) nuclear body complex, participating in transcriptional control, apoptosis, and antiviral defense.

Functionally, SP110 antibody identifies a 688-amino-acid protein that acts as a coactivator for nuclear hormone receptors and NF-kappaB-dependent transcription. SP110 regulates gene expression in macrophages and lymphocytes, enhancing interferon-stimulated gene transcription and pathogen defense. It also contributes to chromatin remodeling and transcriptional repression of inflammatory genes through PML-associated nuclear bodies.

The SP110 gene is located on chromosome 2q37.1 and is highly expressed in hematopoietic tissues. SP110 expression is induced by interferon signaling and pathogen exposure, positioning it as a regulator of innate and adaptive immune responses. Its nuclear localization and coactivator activity support immune system homeostasis and pathogen resistance.

Pathologically, SP110 gene mutations are associated with hepatic veno-occlusive disease with immunodeficiency (VODI), a rare autosomal recessive disorder causing liver failure and impaired immunity. Abnormal expression of SP110 has also been linked to autoimmune conditions and susceptibility to intracellular infections such as tuberculosis. Research with SP110 antibody supports studies in nuclear organization, immune regulation, and transcriptional control.

SP110 antibody is suitable for western blotting, immunofluorescence, and immunohistochemistry to detect nuclear body components and transcriptional cofactors. NSJ Bioreagents offers SP110 antibody reagents validated for use in immunology, transcription, and chromatin regulation research.

Structurally, SP110 contains N-terminal SAND and coiled-coil domains that mediate DNA and protein binding, as well as nuclear localization signals that target it to PML bodies. This antibody enables analysis of SP110's role in transcriptional activation and immune regulation under interferon signaling conditions.

Application Notes

Optimal dilution of the SP110 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SP110 recombinant protein (Position: M1-E615) was used as the immunogen for the SP110 antibody.

Storage

After reconstitution, the SP110 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.