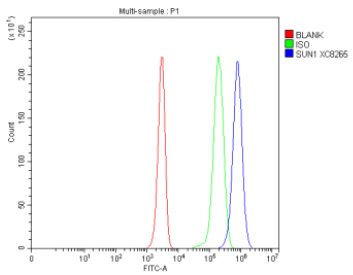
SUN1 Antibody / Sad1/UNC-84 domain-containing protein 1 Antibody (FY12319)

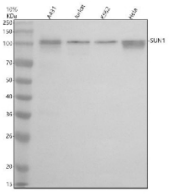
Catalog No.	Formulation	Size
FY12319	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Species Reactivity	Human
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	O94901
RRID	AB_3754319
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This SUN1 antibody is available for research use only.



SUN1 Antibody in Human Jurkat T Cells FACS. Flow cytometry analysis of fixed and permeabilized human Jurkat T cells with SUN1 Antibody / Sad1/UNC-84 Domain-Containing Protein 1 Antibody at 1 ug/million cells. Cells were fixed with 4% paraformaldehyde, permeabilized and blocked with 10% normal goat serum before incubation with the primary antibody for 30 min at 20oC. DyLight 488-conjugated goat anti-rabbit IgG was used as the secondary antibody at 5-10 ug/million cells for 30 min at 20oC. The blue histogram represents SUN1 staining, green represents the isotype control and red represents unstained cells. This SUN1 Antibody demonstrates intracellular detection of Sad1/UNC-84 domain-containing protein 1 in human Jurkat T cells.



SUN1 Antibody Human Cell WB. Western blot demonstrates detection of SUN1 in human A431, Jurkat, K562, and HeLa cell lysates. A prominent band is observed at approximately 100 kDa, slightly above the predicted molecular weight of approximately 87 kDa. This higher apparent molecular weight is consistent with published reports describing post-translationally modified and alternatively spliced SUN1 isoforms. This SUN1 Antibody is suitable for studies of SUN1, a nuclear envelope protein involved in LINC complex organization and nuclear-cytoskeletal coupling.

Description

SUN1 antibody detects Sad1/UNC-84 domain-containing protein 1, encoded by the SUN1 gene on chromosome 7p22.3. SUN1 antibody is widely used in nuclear envelope, cytoskeletal, and cell structure research. SUN1 is an inner nuclear membrane protein that interacts with KASH domain proteins at the outer nuclear membrane to form the LINC (linker of nucleoskeleton and cytoskeleton) complex. This complex physically connects the nuclear interior with the cytoskeleton, enabling nuclear positioning, mechanotransduction, and chromosome dynamics.

Structurally, SUN1 is a ~90 kDa type II transmembrane protein with a conserved SUN domain that extends into the perinuclear space. It anchors to the nuclear lamina and interacts with chromatin-associated proteins inside the nucleus. SUN1 can heterodimerize with SUN2 to form diverse LINC complexes. Expression is ubiquitous, with enrichment in proliferating and differentiating cells.

Functionally, SUN1 regulates nuclear migration, anchorage, and mechanotransduction. It is essential for meiotic chromosome pairing, telomere tethering, and centrosome-nucleus coupling. SUN1 also contributes to DNA repair and genomic stability. Researchers use SUN1 antibody to study nuclear organization, mechanobiology, and chromosome dynamics.

Clinically, SUN1 mutations and dysregulation are associated with laminopathies, muscular dystrophies, and neurodevelopmental disorders. Disruption of the LINC complex impairs nuclear positioning and mechanosignaling, leading to disease. SUN1 also contributes to cancer progression by altering nuclear morphology and chromatin organization. NSJ Bioreagents provides SUN1 antibody for research in nuclear architecture, mechanobiology, and disease mechanisms.

Experimentally, SUN1 antibody is used in western blotting to detect the ~90 kDa protein, in immunofluorescence microscopy to visualize nuclear envelope localization, and in immunohistochemistry to study tissue-specific expression. Co-immunoprecipitation with SUN1 antibody identifies binding partners within the LINC complex.

SUN1 is an inner nuclear membrane protein that contributes to nuclear envelope organization and nuclear-cytoskeletal coupling; explore related targets on our Nuclear Marker Antibody page.

Application Notes

Optimal dilution of the SUN1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SUN1 recombinant protein (Position: D32-E619) was used as the immunogen for the SUN1 antibody.

Storage

After reconstitution, the SUN1 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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