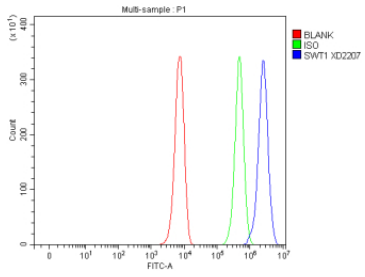
SWT1 Antibody / C1orf26 (FY12398)

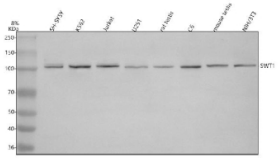
Catalog No.	Formulation	Size
FY12398	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q5T5J6
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This SWT1 antibody is available for research use only.



Flow Cytometry analysis of K562 cells using anti-SWT1 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-SWT1 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.



Western blot analysis of SWT1 using anti-SWT1 antibody. Electrophoresis was performed on a 8% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human Jurkat whole cell lysates, Lane 4: human U251 whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: rat C6 whole cell lysates, Lane 7: mouse testis tissue lysates, Lane 8: mouse NIH/3T3 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-SWT1 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 SWT1 is ~103 kDa.

Description

The SWT1 antibody targets Pre-mRNA-splicing factor SWT1 homolog, a nuclear protein encoded by the SWT1 gene. This enzyme is involved in RNA processing, quality control, and surveillance pathways that ensure proper pre-mRNA splicing and ribonucleoprotein maturation. Pre-mRNA-splicing factor SWT1 homolog is an RNA endonuclease that trims aberrant or misprocessed RNA precursors, maintaining transcriptome fidelity. The SWT1 antibody provides researchers with a reliable tool for studying nuclear RNA metabolism, splicing complex dynamics, and gene expression regulation.

Pre-mRNA-splicing factor SWT1 homolog localizes to nucleoplasmic and nucleolar regions where active splicing occurs. It contains conserved zinc-finger and endonuclease domains required for RNA substrate recognition and cleavage. The SWT1 antibody allows visualization of this nuclear factor, enabling the investigation of its roles in processing small nuclear RNAs (snRNAs) and small nucleolar RNAs (snoRNAs). Through these actions, SWT1 contributes to ribosome biogenesis and overall RNA quality assurance within the nucleus.

Loss or dysfunction of Pre-mRNA-splicing factor SWT1 homolog leads to accumulation of defective pre-mRNA and abnormal spliceosome assembly, disrupting normal gene expression. The SWT1 antibody aids in identifying changes in SWT1 expression or localization in experimental systems subjected to transcriptional stress or RNA splicing inhibition. Studies indicate that this factor participates in safeguarding the transcriptome against RNA processing defects that can trigger cellular stress responses.

Beyond RNA metabolism, SWT1 may interact with other nuclear RNA decay enzymes, coordinating pathways that remove splicing intermediates and cryptic transcripts. The SWT1 antibody supports mechanistic studies exploring these complexes, helping define how nuclear RNA degradation interfaces with splicing surveillance. Its conservation from yeast to humans highlights an evolutionarily stable role in RNA integrity maintenance.

The SWT1 antibody performs effectively in western blotting, immunofluorescence, and immunohistochemistry, showing strong nuclear staining consistent with RNA processing activity. NSJ Bioreagents provides this antibody with validated specificity for RNA biology and molecular genetics research. By enabling accurate detection of Pre-mRNA-splicing factor SWT1 homolog, the SWT1 antibody supports exploration of RNA quality control mechanisms, nuclear surveillance pathways, and the molecular links between RNA metabolism and gene expression stability.

Application Notes

Optimal dilution of the SWT1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human C1orf26/SWT1 recombinant protein (Position: Q322-R889) was used as the immunogen for the SWT1 antibody.

Storage

After reconstitution, the SWT1 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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