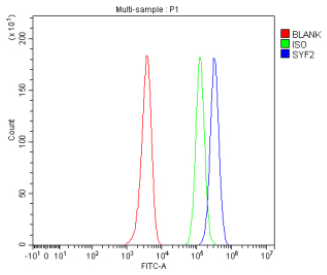
SYF2 Antibody / Pre-mRNA splicing factor SYF2 (FY12772)

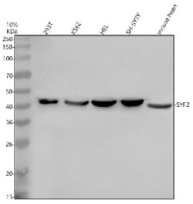
Catalog No.	Formulation	Size
FY12772	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
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	O95926
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This SYF2 antibody is available for research use only.



Flow Cytometry analysis of HEL cells using anti-SYF2 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-SYF2 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 SYF2 using anti-SYF2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human 293T whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: human SH-SY5Y whole cell lysates, Lane 5: rat heart 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-SYF2 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 major band is detected at ~42 kDa in human samples and ~39 kDa in mouse heart, consistent with the known post-translationally modified and electrophoretically retarded form of SYF2 (predicted ~29 kDa).

Description

SYF2 antibody detects Pre-mRNA splicing factor SYF2, a component of the spliceosome complex that participates in mRNA processing, cell cycle progression, and DNA damage response. Encoded by the SYF2 gene on chromosome 1p35.2, this protein acts as a conserved splicing factor that associates with the U5 snRNP complex and other splicing regulators. SYF2 is required for efficient assembly and catalysis of the spliceosome, ensuring accurate intron removal and exon joining during pre-mRNA maturation. Its function extends beyond RNA processing to cell proliferation and genomic stability.

SYF2 interacts with PRPF19, CDC5L, and other components of the spliceosome-associated NTC complex to facilitate transition between spliceosome conformations. It also coordinates splicing with transcription by associating with RNA polymerase II elongation complexes. In addition to its role in RNA processing, SYF2 is involved in G1/S phase progression, likely through regulation of splicing of genes involved in DNA replication and repair. Depletion of SYF2 disrupts normal cell cycle progression, underscoring its role in proliferative control.

The SYF2 antibody is used in RNA biology, cell cycle, and genomics research to study spliceosome assembly and mRNA maturation. Western blot analysis identifies a 24 kilodalton band corresponding to SYF2, and immunofluorescence demonstrates nuclear localization consistent with its splicing function. This antibody enables monitoring of SYF2 expression and localization in studies of transcriptional regulation and RNA processing.

In cancer research, SYF2 has emerged as a proliferation-associated factor, with overexpression reported in breast, lung, and colorectal cancers. It may contribute to tumor progression by promoting efficient splicing of growth-related transcripts. The SYF2 antibody provides a reliable tool for exploring splicing factor regulation, cell cycle control, and their intersections in disease mechanisms. NSJ Bioreagents offers this antibody validated for its applications, ensuring dependable performance across multiple assay types.

Application Notes

Optimal dilution of the SYF2 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human SYF2 was used as the immunogen for the SYF2 antibody.

Storage

After reconstitution, the SYF2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.