# NSUN6 Antibody / NOP2/Sun RNA methyltransferase family member 6 (FY12291)

| Catalog No. | Formulation | Size |
|---|---|---|
| FY12291 | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml | 100 ug |

**Bulk quote request**

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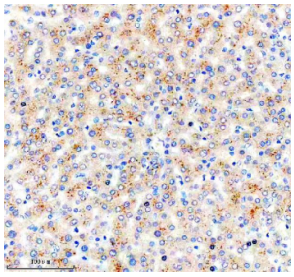
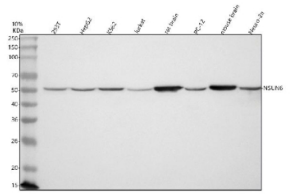
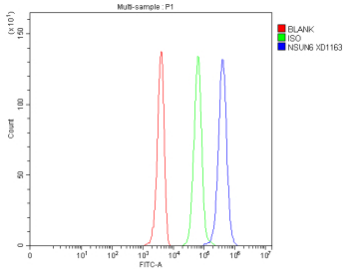
|---|---|
| **Availability** | 1-2 days |
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Lyophilized |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Immunogen affinity purified |
| **Buffer** | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4. |
| **UniProt** | Q8TEA1 |
| **Localization** | Golgi apparatus |
| **Applications** | Western Blot : 0.25-0.5ug/ml<br>Immunohistochemistry : 2-5ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>ELISA : 0.1-0.5ug/ml |
| **Limitations** | This NSUN6 antibody is available for research use only. |



Immunohistochemical staining of NSUN6 using anti-NSUN6 antibody. NSUN6 was detected in a paraffin-embedded section of human liver cancer 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-NSUN6 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 NSUN6 using anti-NSUN6 antibody. Lane 1: human 293T whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human K562 whole cell lysates, Lane 4: human Jurkat whole cell lysates, Lane 5: rat brain tissue lysates, Lane 6: rat PC-12 whole cell lysates, Lane 7: mouse brain tissue lysates, Lane 8: mouse Neuro-2a 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-NSUN6 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 enhanced chemiluminescent. Expected molecular weight of NSUN6 ~52â€‰kDa (469â€‰aa). Observed band at ~55â€‰kDa, consistent with published data showing NSUN6 migrating slightly above its predicted size and across antibody-validation sources (52-55â€‰kDa). The ~3â€‰kDa upward shift may reflect minor post-translational modification or gel-migration behavior rather than an alternate isoform.




Flow Cytometry analysis of 293T cells using anti-NSUN6 antibody. Overlay histogram showing 293T 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-NSUN6 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

NSUN6 antibody detects NOP2/Sun RNA methyltransferase family member 6, encoded by the NSUN6 gene on chromosome 10q22.1. NSUN6 antibody is widely used in RNA biology, epigenetics, and cancer research. NSUN6 belongs to the RNA cytosine methyltransferase family, catalyzing site-specific methylation of cytosine residues in tRNAs and possibly other RNAs. This modification, known as 5-methylcytosine, influences RNA stability, structure, and function.

Structurally, NSUN6 is a ~55 kDa cytoplasmic protein containing an RNA recognition motif and a conserved catalytic domain typical of cytosine-5 methyltransferases. It selectively modifies tRNAs at position C72 in the acceptor stem, a modification critical for efficient aminoacylation and translation. NSUN6 localizes predominantly in the cytoplasm but may also act in the nucleus under certain conditions.

Functionally, NSUN6 promotes translation fidelity and efficiency by stabilizing tRNA structure. It contributes to cellular stress responses, growth, and differentiation. Altered NSUN6 activity disrupts RNA modifications, impacting protein synthesis and cellular homeostasis. Researchers use NSUN6 antibody to study RNA epigenetics, translation control, and stress biology.

Clinically, dysregulation of RNA methyltransferases including NSUN6 is implicated in cancer, neurodevelopmental disorders, and viral infections. NSUN6 overexpression has been linked to certain tumors, suggesting a role in tumor growth. Conversely, loss-of-function may impair translation and stress adaptation. Because RNA modifications are emerging therapeutic targets, NSUN6 is an attractive focus for research. NSJ Bioreagents supplies NSUN6 antibody for epigenetics, cancer, and RNA biology studies.

Experimentally, NSUN6 antibody is applied in western blotting to detect the ~55 kDa protein, in immunofluorescence microscopy to visualize cytoplasmic distribution, and in RNA immunoprecipitation to map RNA substrates. Co-immunoprecipitation with NSUN6 antibody identifies protein partners in RNA methylation complexes.

## Application Notes

Optimal dilution of the NSUN6 antibody should be determined by the researcher.

## Immunogen

E.coli-derived human NSUN6 recombinant protein (Position: E40-E400) was used as the immunogen for the NSUN6 antibody.

## Storage

After reconstitution, the NSUN6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.