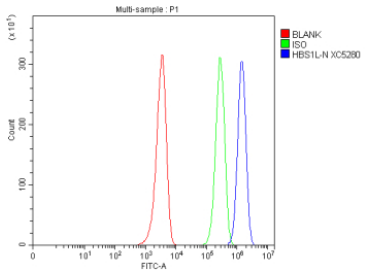
HBS1L Antibody / HBS1-like protein (FY12227)

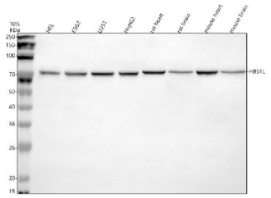
Catalog No.	Formulation	Size
FY12227	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q9Y450
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This HBS1L antibody is available for research use only.



Flow Cytometry analysis of HEL cells using anti-HBS1L 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-HBS1L 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 HBS1L using anti-HBS1L antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human HEL whole cell lysates, Lane 2: human K562 whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: rat heart tissue lysates, Lane 6: rat brain tissue lysates, Lane 7: mouse heart tissue lysates, Lane 8: mouse brain 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-HBS1L 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 specific band was detected for HBS1L at approximately 75 kDa. The expected band size for HBS1L is at 75 kDa.

Description

HBS1L antibody detects HBS1-like protein, encoded by the HBS1L gene on chromosome 6q23.3. HBS1L antibody is widely applied in studies of translation, mRNA surveillance, and hematopoiesis. HBS1L is a GTP-binding protein that functions in the no-go decay (NGD) pathway, a quality control mechanism that degrades mRNAs stalled during translation. It shares homology with translation elongation factors and interacts with the exosome complex and PELOTA to resolve stalled ribosomes. Expression is broadly detected across tissues, with particularly high levels in bone marrow and hematopoietic cells.

Structurally, HBS1L is a ~70 kDa protein containing GTPase domains homologous to elongation factor 1a. These domains hydrolyze GTP to drive ribosome dissociation and recycling. A C-terminal domain mediates interactions with PELOTA and other decay machinery. Alternative splicing generates isoforms with distinct regulatory properties. Its domain organization reflects its role in linking translational control with RNA surveillance.

Functionally, HBS1L participates in mRNA surveillance by recognizing stalled ribosomes and promoting their recycling. It collaborates with PELOTA to split ribosomes, freeing subunits for new rounds of translation. HBS1L also connects RNA quality control with hematopoietic differentiation, where it modulates globin gene expression and erythroid lineage decisions. Genome-wide association studies identify HBS1L variants as regulators of fetal hemoglobin levels. Researchers use HBS1L antibody to study mRNA decay, translation regulation, and blood cell development.

Clinically, HBS1L is implicated in hematologic disorders and anemia. Genetic polymorphisms at the HBS1L-MYB intergenic region strongly influence fetal hemoglobin levels and modify disease severity in beta-thalassemia and sickle cell disease. These polymorphisms affect HBS1L expression and regulation, highlighting its clinical relevance. Dysregulated HBS1L expression also contributes to myelodysplastic syndromes and leukemias. NSJ Bioreagents supplies HBS1L antibody to support research in translation control, hematology, and RNA biology.

Experimentally, HBS1L antibody is used in western blotting to detect the ~70 kDa protein, in immunohistochemistry to study bone marrow expression, and in immunofluorescence microscopy to examine cytoplasmic localization. Co-immunoprecipitation with HBS1L antibody identifies PELOTA and exosome complex partners involved in NGD.

Application Notes

Optimal dilution of the HBS1L antibody should be determined by the researcher.

Immunogen

E.coli-derived human HBS1L recombinant protein (Position: H293-K622) was used as the immunogen for the HBS1L antibody.

Storage

After reconstitution, the HBS1L 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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