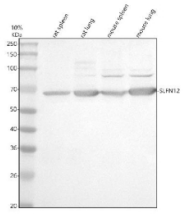
SLFN12 Antibody / Schlafen family member 12 (FY12900)

Catalog No.	Formulation	Size
FY12900	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	Mouse, Rat
Format	Lyophilized
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	Q8IYM2
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This SLFN12 antibody is available for research use only.



Western blot analysis of SLFN12 using anti-SLFN12 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat spleen tissue lysates, Lane 2: rat lung tissue lysates, Lane 3: mouse spleen tissue lysates, Lane 4: mouse lung 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-SLFN12 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 SLFN12 at approximately 67 kDa. The expected molecular weight of SLFN12 is ~67 kDa.

Description

SLFN12 antibody detects Schlafen family member 12, a cytoplasmic regulatory protein involved in epithelial differentiation, translational control, and antiviral defense. Encoded by the SLFN12 gene on chromosome 17q12, this member of the Schlafen family functions as a modulator of protein synthesis and cellular differentiation through

interactions with the ribosome and mRNA translation machinery. SLFN12 expression is induced by interferon signaling and during epithelial maturation, linking immune regulation with cell differentiation.

Structurally, SLFN12 is a 578-amino-acid protein of approximately 66 kilodaltons containing an N-terminal Schlafen domain and C-terminal helicase-like motifs that mediate RNA and ribosome binding. Unlike some other Schlafen family members, SLFN12 lacks DNA helicase activity but regulates translation elongation and protein turnover through non-catalytic interactions. It localizes mainly to the cytoplasm and perinuclear region, where it acts as a translational repressor for specific mRNAs involved in proliferation and stress response.

The SLFN12 antibody is widely used in immunology, virology, and epithelial biology research to study interferon-stimulated gene expression, translational regulation, and mucosal differentiation. Western blot analysis identifies a 66 kilodalton band corresponding to SLFN12, while immunofluorescence shows cytoplasmic and perinuclear staining in epithelial and immune cells. This antibody supports studies examining the intersection of innate immune signaling, protein translation, and epithelial homeostasis.

Functionally, SLFN12 inhibits translation of certain viral and cellular mRNAs, contributing to the antiviral defense mechanisms of interferon-stimulated cells. It also regulates epithelial differentiation in intestinal and airway epithelia by repressing translation of growth-promoting proteins and promoting barrier maturation. Dysregulation of SLFN12 expression is linked to abnormal epithelial remodeling, inflammation, and tumorigenesis. The SLFN12 antibody provides a high-quality tool for exploring Schlafen protein function, immune signaling, and translational control mechanisms. NSJ Bioreagents validates this antibody for its applications, ensuring consistent performance for studies of immune and epithelial biology.

Application Notes

Optimal dilution of the SLFN12 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SLFN12 recombinant protein (Position: E144-T578) was used as the immunogen for the SLFN12 antibody.

Storage

After reconstitution, the SLFN12 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.