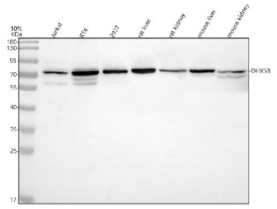
DHX58 Antibody / DExH-box helicase 58 (FY12647)

Catalog No.	Formulation	Size
FY12647	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	Q96C10
Applications	Western Blot : 0.25-0.5ug/ml ELISA : 0.1-0.5ug/ml
Limitations	This DHX58 antibody is available for research use only.



Western blot analysis of DHX58 using anti-DHX58 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human Jurkat whole cell lysates, Lane 2: human RT4 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: rat liver tissue lysates, Lane 5: rat kidney tissue lysates, Lane 6: mouse liver tissue lysates, Lane 7: mouse kidney 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-DHX58 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 DHX58 at approximately 77 kDa. The expected molecular weight of DHX58 is ~77 kDa.

Description

DHX58 antibody detects DExH-box helicase 58, also known as LGP2, a cytoplasmic RNA helicase that functions as a

regulator of antiviral innate immune responses. DHX58 belongs to the RIG-I-like receptor (RLR) family, which includes RIG-I and MDA5, and is involved in sensing viral RNA to trigger interferon production. The DHX58 antibody is widely used in immunology, virology, and innate signaling research to study viral RNA recognition and interferon pathway regulation.

DHX58 is encoded by the DHX58 gene located on human chromosome 17q21.1. The protein is approximately 678 amino acids long and contains a helicase core domain, ATP-binding motifs, and a C-terminal regulatory domain. Unlike RIG-I and MDA5, DHX58 lacks the N-terminal CARD domains required for direct signaling, functioning instead as a modulator of their activity. It localizes to the cytoplasm and associates with stress granules and viral replication complexes during infection.

The DHX58 antibody detects a 75 kilodalton band by western blot and exhibits punctate cytoplasmic staining by immunofluorescence microscopy. DHX58 acts as a positive or negative regulator of antiviral signaling depending on context. It binds double-stranded RNA and modulates the activity of MDA5 and RIG-I, fine-tuning the magnitude and duration of type I interferon responses. During viral infection, DHX58 helps discriminate self from non-self RNA, preventing inappropriate immune activation.

Mutations or altered expression of DHX58 affect susceptibility to viral pathogens such as influenza, hepatitis C, and coronaviruses. It also influences autoimmunity, where excessive activation of the RLR pathway leads to chronic inflammation and tissue damage. Beyond immunity, DHX58 participates in RNA metabolism and stress granule dynamics, linking it to translational control during cellular stress.

As a key regulator of antiviral sensing, DHX58 provides a molecular handle for understanding innate immune balance and pathogen recognition. NSJ Bioreagents provides a validated DHX58 antibody optimized for its applications, supporting research into host defense, interferon regulation, and viral pathogenesis.

Application Notes

Optimal dilution of the DHX58 antibody should be determined by the researcher.

Immunogen

E.coli-derived human LGP2/DHX58 recombinant protein (Position: A38-S658) was used as the immunogen for the DHX58 antibody.

Storage

After reconstitution, the DHX58 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.