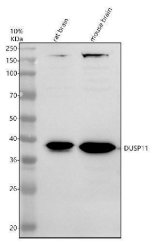
DUSP11 Antibody / RNA/RNP complex-1-interacting phosphatase Antibody (FY13641)

Catalog No.	Formulation	Size
FY13641	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O75319
Applications	Western blot: 0.5-1ug/ml ELISA: 0.1-0.5 ug/ml
Limitations	This DUSP11 Antibody / RNA/RNP complex-1-interacting phosphatase Antibody is provided for laboratory research use only.



DUSP11 Antibody by WB in rat and mouse brain tissue. Western blot analysis using RNA/RNP complex-1-interacting phosphatase Antibody shows a prominent band at approximately 39 kDa, consistent with the expected molecular weight of DUSP11. Lane 1 contains rat brain tissue lysate, and lane 2 contains mouse brain tissue lysate, with 30 ug total protein loaded per lane under reducing conditions. Proteins were separated on a 10% SDS-PAGE gel, transferred to nitrocellulose, and probed with rabbit polyclonal primary antibody at 0.5 ug/mL, followed by an HRP-conjugated anti-rabbit secondary antibody. Chemiluminescent detection reveals the target-sized band in both species.

Description

DUSP11 Antibody / RNA/RNP complex-1-interacting phosphatase Antibody recognizes a dual-specificity phosphatase with an important and unusual role in RNA metabolism. DUSP11, also called PIR1, can remove phosphate groups from the 5' ends of certain RNA molecules, distinguishing it from phosphatases studied primarily for regulation of protein phosphorylation. Its activity influences the chemical identity of RNA termini and thereby affects how transcripts are recognized by downstream RNA-processing and surveillance pathways.

RNA polymerases can generate transcripts with 5' triphosphate ends, while subsequent processing may create

monophosphate or other terminal structures. These differences are biologically significant because RNA-binding proteins and exonucleases often discriminate among 5' end chemistries. DUSP11 has been shown to act as an RNA triphosphatase, converting selected triphosphorylated RNA ends to forms that can enter additional processing or degradation pathways. This activity is especially relevant for certain small noncoding RNAs and transcripts produced by RNA polymerase III.

Control of RNA 5' phosphorylation can also affect innate immune recognition. Cytoplasmic RNA sensors may respond to particular RNA structures and terminal phosphate states, helping cells distinguish potentially threatening nucleic acids from ordinary transcripts. DUSP11-mediated processing can therefore influence the abundance and signaling potential of RNA species without changing their nucleotide sequences. The consequences depend on which RNAs are accessible to the enzyme and which surveillance proteins are present.

Research on DUSP11 has further connected RNA end processing to viral RNA biology, where the terminal chemistry of transcripts can shape their stability and interactions with host defenses. These findings emphasize that phosphatase activity is not limited to conventional protein-signaling networks. NSJ Bioreagents offers this DUSP11 Antibody to support investigation of RNA 5' end remodeling and the mechanisms linking transcript processing to RNA stability and immune sensing. DUSP11 illustrates how a single chemical modification at an RNA terminus can redirect the fate of an entire transcript.

Explore related research targets in our Signal Transduction Antibodies for Cell Signaling and Regulatory Pathway Research collection.

Application Notes

The recommended approach is to establish the optimal working dilution of the DUSP11 Antibody / RNA/RNP complex-1-interacting phosphatase Antibody through preliminary testing.

Immunogen

The DUSP11 Antibody was generated using e. coli-derived human DUSP11 recombinant protein (amino acids G12-P323).

Storage

Store the reconstituted DUSP11 Antibody at 4oC for up to one month. For long-term storage, divide into aliquots and keep at -20oC for up to six months. Avoid repeated freeze-thaw cycles.

Alternate Names

DUSP11 antibody, RNA/RNP complex-1-interacting phosphatase antibody, dual specificity phosphatase 11 antibody, PIR1 antibody, EC:3.1.3.- antibody, DUSP 11 antibody, Dual specificity protein phosphatase 11 antibody

Copyright © NSJ Bioreagents. All rights reserved.