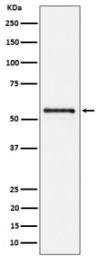
PTBP2 Antibody / Polypyrimidine tract binding protein 2 [clone 31P38] (FY12239)

Catalog No.	Formulation	Size
FY12239	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

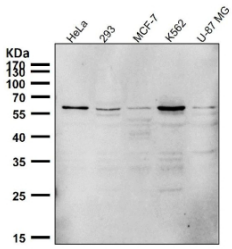
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	2-3 weeks
Species Reactivity	Human, Mouse, Rat
Format	Liquid
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	31P38
Purity	Affinity-chromatography
Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
UniProt	Q9UKA9
Applications	Western blot: 1:500-1:2000
Limitations	This PTBP2 antibody is available for research use only.



Western blot analysis of PTBP2 expression in Neuro2a cell lysate using PTBP2 antibody.



All lanes use the PTBP2 antibody at 1:1K dilution for 1 hour at room temperature.

Description

PTBP2 antibody detects polypyrimidine tract binding protein 2, an RNA-binding protein that regulates alternative splicing, mRNA transport, and neuronal differentiation. PTBP2, also known as nPTB, belongs to the heterogeneous nuclear ribonucleoprotein (hnRNP) family and contains four RNA recognition motifs that bind CU-rich elements in pre-mRNA. It is expressed predominantly in neurons and testes, where it orchestrates tissue-specific splicing programs.

Research using PTBP2 antibody demonstrates its central role in neuronal development. During neurogenesis, PTBP2 replaces PTBP1 in post-mitotic neurons, reprogramming splicing to promote synaptic maturation and axonal growth. Knockdown of PTBP2 disrupts neuronal differentiation, leading to defective synapse formation and impaired connectivity. Conditional knockout models confirm PTBP2's requirement for brain development, learning, and memory.

In disease contexts, PTBP2 dysregulation has been linked to neurological and reproductive disorders. Aberrant PTBP2 expression alters splicing of genes essential for synaptic signaling, contributing to autism spectrum disorders, intellectual disability, and epilepsy. In spermatogenesis, PTBP2 regulates transcripts critical for germ cell development, and its loss results in male infertility.

Cancer studies have also implicated PTBP2 in tumor progression. In gliomas and other cancers, PTBP2 expression modulates alternative splicing of oncogenes and tumor suppressors, altering cell proliferation and survival. By influencing splicing choices, PTBP2 may contribute to cancer cell adaptability and therapy resistance.

PTBP2 is also a promising target for therapeutic intervention. Manipulating PTBP2 activity or expression has been explored in reprogramming strategies, where suppression of PTBP2 promotes direct conversion of glial cells into functional neurons. Such approaches have potential applications in regenerative medicine and treatment of neurodegenerative disorders.

Antibodies against PTBP2 are validated for western blot, immunohistochemistry, immunofluorescence, and RNA immunoprecipitation. These reagents enable detection of PTBP2 expression patterns and its association with neuronal transcripts. Clone-based antibodies ensure high specificity across developmental and disease models.

NSJ Bioreagents supplies this PTBP2 antibody for research into RNA regulation, neuronal differentiation, and disease biology.

Application Notes

Optimal dilution of the PTBP2 antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human PTBP2 was used as the immunogen for the PTBP2 antibody.

Storage

Store the PTBP2 antibody at -20oC.

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