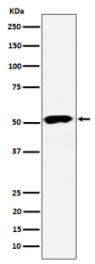
PPP2R5E Antibody / Serine/threonine-protein phosphatase 2A regulatory subunit B epsilon [clone 30P55] (FY12986)

Catalog No.	Formulation	Size
FY12986	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	30P55
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	Q16537
Applications	Western blot: 1:500-1:2000 Immunocytochemistry/Immunofluorescence: 1:50-1:200
Limitations	This PPP2R5E antibody is available for research use only.



Western blot analysis of PPP2R5E expression in human 293 cell lysate using PPP2R5E antibody. Predicted molecular weight: 50~56kDa.

Description

PPP2R5E antibody detects Serine/threonine-protein phosphatase 2A regulatory subunit B epsilon, encoded by the

PPP2R5E gene. Protein phosphatase 2A (PP2A) is one of the major serine threonine phosphatases in eukaryotic cells, responsible for dephosphorylating a wide range of substrates and regulating numerous cellular pathways. PP2A functions as a heterotrimeric complex consisting of a scaffolding A subunit, a catalytic C subunit, and a regulatory B subunit. PPP2R5E encodes one of the B' (or B56) family members, specifically the epsilon isoform, which directs substrate specificity, subcellular localization, and regulatory activity. PPP2R5E antibody is a key reagent for studying the regulation of PP2A mediated signaling.

Serine/threonine-protein phosphatase 2A regulatory subunit B'epsilon directs PP2A activity toward specific signaling pathways, including those governing cell cycle progression, apoptosis, and cytoskeletal organization. Research with PPP2R5E antibody has demonstrated its role in directing PP2A complexes to centrosomes, kinetochores, and other subcellular structures, where it contributes to mitotic spindle formation and chromosome segregation. By targeting defined substrates, PPP2R5E ensures that PP2A exerts context dependent regulatory effects rather than indiscriminate dephosphorylation.

Aberrant regulation of PP2A, including dysfunction of regulatory subunits such as PPP2R5E, has been linked to cancer, neurodegeneration, and cardiovascular disease. Loss of PP2A activity promotes oncogenesis by enhancing phosphorylation driven signaling pathways such as PI3K AKT and MAPK. Studies employing PPP2R5E antibody have shown that altered expression of this subunit contributes to tumorigenesis and drug resistance. In the nervous system, deregulated PP2A activity is implicated in tau hyperphosphorylation and neurodegenerative conditions including Alzheimer disease. PPP2R5E antibody provides a means to explore these dysfunctions and to assess whether restoration of PP2A activity can provide therapeutic benefit.

In addition to disease connections, PPP2R5E regulates developmental and metabolic processes. It influences insulin signaling, cardiac function, and immune responses, highlighting its broad biological significance. Research using PPP2R5E antibody has revealed that PP2A complexes containing this regulatory subunit can fine tune signaling thresholds, allowing cells to balance growth and survival. This underscores the precision with which PP2A holoenzymes must be assembled to maintain cellular homeostasis.

PPP2R5E antibody is widely used in western blotting, immunohistochemistry, and immunoprecipitation. Western blotting detects expression patterns in dividing cells and tumors, while immunohistochemistry reveals tissue specific expression across brain, muscle, and immune organs. Immunoprecipitation with PPP2R5E antibody allows isolation of PP2A complexes containing this regulatory subunit, enabling analysis of substrate interactions and signaling outcomes. These approaches ensure that PPP2R5E antibody is versatile across molecular and cellular applications.

By supplying validated PPP2R5E antibody reagents, NSJ Bioreagents supports research into phosphatase biology, cancer signaling, and neurodegeneration. Detection of Serine/threonine-protein phosphatase 2A regulatory subunit B'epsilon provides insight into how PP2A complexes control fundamental processes in health and disease.

Application Notes

Optimal dilution of the PPP2R5E antibody should be determined by the researcher.

Immunogen

A synthesized peptide derived from human PPP2R5E was used as the immunogen for the PPP2R5E antibody.

Storage

Store the PPP2R5E antibody at -20oC.

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