

SRR Antibody / Serine racemase [clone 30S73] (FY13185)

Western Blot: 1:500-1:2000

Catalog No. F	Formulation Communication Comm	Size
	abbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium zide and 50% glycerol, 0.4-0.5mg/ml BSA	100 ul

Recombinant RABBIT MONOCLONAL **Bulk quote request Availability** 2-3 weeks **Species Reactivity** Human **Format** Liquid Recombinant Rabbit Monoclonal Clonality Rabbit IgG Isotype **Clone Name** 30S73 **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 Q9GZT4

Description

Applications

Limitations

SRR antibody detects Serine racemase, encoded by the SRR gene. Serine racemase is a pyridoxal phosphate dependent enzyme that catalyzes the conversion of L-serine to D-serine. D-serine functions as a co-agonist at NMDA receptors in the brain, where it modulates synaptic plasticity, learning, and memory. SRR antibody provides researchers with a specific reagent to study neurotransmission, amino acid metabolism, and neuropsychiatric disease.

This SRR antibody is available for research use only.

Serine racemase is expressed primarily in astrocytes and neurons, where it controls production of D-serine in the central nervous system. Research using SRR antibody has shown that D-serine binds to the glycine site of NMDA receptors, regulating receptor activation. This makes SRR activity essential for synaptic plasticity, long-term potentiation, and cognitive function. Loss of D-serine production due to impaired SRR activity results in deficits in NMDA receptor signaling.

Dysregulation of Serine racemase is linked to neurological and psychiatric disorders. Studies with SRR antibody have revealed that reduced activity contributes to schizophrenia by decreasing D-serine availability and NMDA receptor function. Conversely, excessive D-serine production may promote excitotoxicity and neurodegeneration in conditions

such as amyotrophic lateral sclerosis and Alzheimer's disease. These findings position SRR as both a biomarker and a potential therapeutic target.

Beyond the brain, Serine racemase contributes to metabolism and signaling in peripheral tissues. Research using SRR antibody has suggested roles in kidney function and immune regulation. Because D-serine influences both neural and systemic physiology, SRR is an enzyme with broad biological significance.

SRR antibody is widely used in western blotting, immunohistochemistry, and immunofluorescence. Western blotting detects full-length and truncated forms, immunohistochemistry highlights expression in brain regions, and immunofluorescence demonstrates astrocytic and neuronal localization. These applications make SRR antibody versatile in neuroscience and physiology research.

By supplying validated SRR antibody reagents, NSJ Bioreagents supports research into neurotransmission, psychiatric disease, and neurodegeneration. Detection of Serine racemase provides insight into how amino acid metabolism intersects with brain signaling and disease.

Application Notes

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

Immunogen

A synthesized peptide derived from human Serine racemase was used as the immunogen for the SRR antibody.

Storage

Store the SRR antibody at -20oC.