

Serine Racemase (D5V9Z) Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W, IP	Reactivity: H M R	Sensitivity: Endogenous	MW (kDa): 37	Source/Isotype: Rabbit IgG	UniProt ID: #Q9GZT4	Entrez-Gene Id: 63826
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation

Dilution

1:1000
1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity Source / Purification

Serine Racemase (D5V9Z) Rabbit mAb recognizes endogenous levels of total serine racemase protein.
Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val240 of human serine racemase protein.

Background

Serine racemase, also called SRR, is an enzyme that is highly expressed in the brain and converts L-serine to D-serine (1,2). D-serine is a co-agonist of the NMDA receptor. NMDA receptor activation requires the binding of glutamate to its GluN2 subunit and the concomitant binding of either glycine or D-serine to its glycine binding site on the GluN1 subunit (3). Decreased activation of NMDA receptors is a typical feature of impaired synaptic plasticity in age-related memory deficits. Therefore, D-serine availability makes serine racemase an important therapeutic target for memory deficit associated with nonpathological aging (4).

Background References

1. Wolosker, H. et al. (1999) *Proc Natl Acad Sci U S A* 96, 13409-14.
2. Wolosker, H. et al. (1999) *Proc Natl Acad Sci U S A* 96, 721-5.
3. McBain, C.J. et al. (1989) *Mol Pharmacol* 36, 556-65.
4. Billard, J.M. (2013) *Eur J Neurosci* 37, 1931-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

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