

#29798 Store at -20°C

## Serine Racemase (D5V9Z) Rabbit mAb



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

### 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

Serine Racemase (D5V9Z) Rabbit mAb recognizes endogenous levels of total serine racemase protein.

### Source / Purification

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

**WB:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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