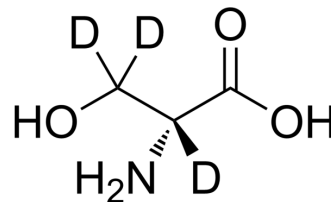


## D-Serine-d<sub>3</sub>

<b>Cat. No.:</b>	HY-100808S
<b>CAS No.:</b>	1414348-52-9
<b>Molecular Formula:</b>	C <sub>3</sub> H <sub>4</sub> D <sub>3</sub> NO <sub>3</sub>
<b>Molecular Weight:</b>	108
<b>Target:</b>	Isotope-Labeled Compounds
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### BIOLOGICAL ACTIVITY

<b>Description</b>	D-Serine-d <sub>3</sub> ((R)-Serine-d <sub>3</sub> ) is a deuterium labeled D-Serine (HY-100808). D-Serine ((R)-Serine), an endogenous amino acid involved in glia-synapse interactions that has unique neurotransmitter characteristics, is a potent co-agonist at the NMDA glutamate receptor. D-Serine has a cardinal modulatory role in major NMDAR-dependent processes including NMDAR-mediated neurotransmission, neurotoxicity, synaptic plasticity, and cell migration <sup>[1][2][3]</sup> .
<b>In Vitro</b>	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-246.
- [2]. Andrea R. Durrant, et al. D-Serine in Neuropsychiatric Disorders: New Advances.
- [3]. MacKay MB, et al. D-Serine: Potential Therapeutic Agent and/or Biomarker in Schizophrenia and Depression *Front Psychiatry*. 2019 Feb 6;10:25.
- [4]. Dai X, et al. D-Serine made by serine racemase in *Drosophila* intestine plays a physiological role in sleep. *Nat Commun*. 2019 May 7;10(1):1986.
- [5]. Suwandhi L, et al. Chronic d-serine supplementation impairs insulin secretion. *Mol Metab*. 2018 Oct;16:191-202.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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