



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

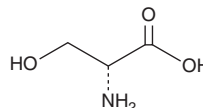
PRODUCT INFORMATION



D-Serine

Item No. 31197

CAS Registry No.: 312-84-5
Synonyms: NSC 77689, (R)-Serine
MF: C₃H₇NO₃
FW: 105.1
Purity: ≥95%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

D-Serine is supplied as a solid. Aqueous solutions of D-serine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of D-serine in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

D-Serine is the dextrorotary isomer of the non-essential amino acid L-serine and a co-agonist of NMDA receptors.¹ It is formed by conversion of L-serine by serine racemase and found primarily in the brain.^{2,3} D-Serine binds to the glycine site of the NMDA receptor and potentiates glutamate-induced currents in oocytes expressing various subunit combinations (EC₅₀s = 0.17-0.32 μM) more potently than glycine.^{1,3} It reverses deficits in prepulse inhibition with prepulses of 69 and 73 decibels (dB), but not 81 dB, and increases the time spent in the target quadrant of the Morris water maze in mice with a mutant form of serine racemase (*Srr*^{Y269*}) when administered at a dose of 600 mg/kg.⁴ Serum levels of D-serine are decreased in patients with schizophrenia.⁵

References

1. Matsui, T., Sekiguchi, M., Hashimoto, A., *et al.* Functional comparison of D-serine and glycine in rodents: The effect on cloned NMDA receptors and the extracellular concentration. *J. Neurochem.* **65**(1), 454-458 (1995).
2. Xia, M., Liu, Y., Figueroa, D.J., *et al.* Characterization and localization of a human serine racemase. *Brain Res. Mol. Brain Res.* **125**(1-2), 96-104 (2004).
3. Mothet, J.P., Parent, A.T., Wolosker, H., *et al.* D-Serine is an endogenous ligand for the glycine site of the N-methyl-D-aspartate receptor. *Proc. Natl. Acad. Sci. USA* **97**(9), 4926-4931 (2000).
4. Labrie, V., Fukumura, R., Rastogi, A., *et al.* Serine racemase is associated with schizophrenia susceptibility in humans and in a mouse model. *Hum. Mol. Genet.* **18**(17), 3227-3243 (2009).
5. Cho, S.-E., Na, K.-S., Cho, S.-J., *et al.* Low D-serine levels in schizophrenia: A systematic review and meta-analysis. *Neurosci. Lett.* **634**, 42-51 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/31/2020

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM