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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

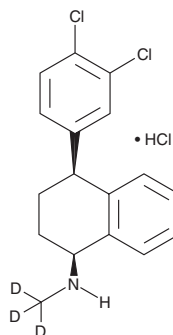
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PRODUCT INFORMATION



Sertraline-d₃ (hydrochloride) Item No. 15857

CAS Registry No.: 1217741-83-7
Formal Name: (1S,4S)-4-(3,4-dichlorophenyl)-1,2,3,4-tetrahydro-N-methyl-d₃-1-naphthalenamine, monohydrochloride
MF: C₁₇H₁₄Cl₂D₃N • HCl
FW: 345.7
Chemical Purity: ≥98% (Sertraline)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Sertraline-d₃ (hydrochloride) is intended for use as an internal standard for the quantification of sertraline (Item No. 14839) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Sertraline-d₃ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the sertraline-d₃ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Sertraline-d₃ (hydrochloride) is soluble in methanol.

Description

Sertraline is a selective serotonin reuptake inhibitor (SSRI).^{1,2} It inhibits monoamine uptake by the serotonin transporter (SERT) with an IC₅₀ value of 70 nM.¹ It is selective for SERT over the norepinephrine and dopamine transporters (IC₅₀s = 520 and 720 nM, respectively). Sertraline (3.2-56 mg/kg, s.c.) reduces immobility in the forced swim test in mice.² Sertraline (5 μM) prevents acid sphingomyelinase activation and subsequent ceramide release induced by infection with replication-deficient vesicular stomatitis virus pseudoviral particles (pp-VSV) presenting the severe acute respiratory coronavirus 2 (SARS-CoV-2) spike protein in Vero cells, an effect that can be overcome with exogenous application of C16 ceramide.³ Formulations containing sertraline have been used in the treatment of depression, obsessive-compulsive disorder (OCD), premenstrual dysphoric disorder (PMDD), and various anxiety disorders.

References

1. Welch, W.M., Kraska, A.R., Sarges, R., *et al.* Nontricyclic antidepressant agents derived from *cis*- and *trans*-1-amino-4-aryltetralins. *J. Med. Chem.* **27**(11), 1508-1515 (1984).
2. Koe, B.K., Weissman, A., Welch, W.M., *et al.* Sertraline, 1S,4S-N-methyl-4-(3,4-dichlorophenyl)-1,2,3,4-tetrahydro-1-naphthylamine, a new uptake inhibitor with selectivity for serotonin. *J. Pharmacol. Exp. Ther.* **226**(3), 686-700 (1983).
3. Carpinteiro, A., Edwards, M.J., Hoffmann, M., *et al.* Pharmacological inhibition of acid sphingomyelinase prevents uptake of SARS-CoV-2 by epithelial cells. *Cell Rep. Med.* **1**(8), 100142 (2020).

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.

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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