

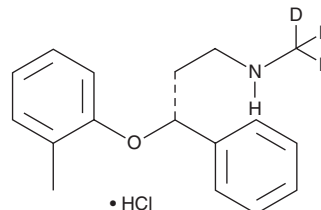
PRODUCT INFORMATION



Atomoxetine-d₃ (hydrochloride)

Item No. 28162

CAS Registry No.: 1217776-38-9
Formal Name: (R)-N-(methyl-d₃)-3-phenyl-3-(o-tolyloxy)propan-1-amine, monohydrochloride
MF: C₁₇H₁₈D₃NO • HCl
FW: 294.8
Chemical Purity: ≥95% (Atomoxetine)
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

Atomoxetine-d₃ (hydrochloride) is intended for use as an internal standard for the quantification of atomoxetine (Item No. 22248) 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).

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

Description

Atomoxetine is a selective norepinephrine reuptake inhibitor with K_i values of 5, 77, and 1,451 nM for norepinephrine, serotonin, and dopamine transporters, respectively.¹ It is selective over the choline, GABA, and adenosine transporters, and a number of neurotransmitter receptors, ion channels, second messengers, and brain/gut peptides. In the rat prefrontal cortex (PFC), it increases extracellular norepinephrine and dopamine by 3-fold and increases Fos expression. Atomoxetine (0.1, 0.5, and 1 mg/kg) reduces premature responding, a measure of impulsivity, by rats in the 5-choice serial reaction time test (5CSRTT) in a dose-dependent manner.² It also has neuroprotective effects when administered prior to ischemic damage in a gerbil model of transient cerebral ischemia.³ Formulations containing atomoxetine have been used in the treatment of attention-deficit hyperactivity disorder (ADHD) in children, adolescents, and adults.

References

1. Bymaster, F.P., Katner, J.S., Nelson, D.L., *et al.* Atomoxetine increases extracellular levels of norepinephrine and dopamine in prefrontal cortex of rat: A potential mechanism for efficacy in attention deficit/hyperactivity disorder. *Neuropsychopharmacology* **27**(5), 699-711 (2002).
2. Blondeau, C. and Dellu-Hagedorn, F. Dimensional analysis of ADHD subtypes in rats. *Biol. Psychiatry* **61**(12), 1340-1350 (2007).
3. Park, J.H., Shin, B.N., Chen, B.H., *et al.* Neuroprotection and reduced gliosis by atomoxetine pretreatment in a gerbil model of transient cerebral ischemia. *J. Neurol. Sci.* **359**(1-2), 373-380 (2015).

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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