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- Trockeneiszuschlag
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- Expressversand

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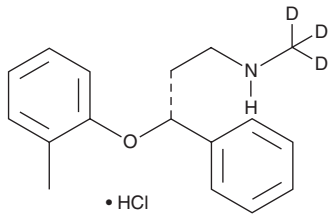
PRODUCT INFORMATION

Atomoxetine-d_3 (hydrochloride)

Item No. 28162

CAS Registry No.: 1217776-38-9
Formal Name: (R)-N-(methyl-d_3)-3-phenyl-3-(*o*-tolyloxy)propan-1-amine, monohydrochloride
MF: $C_{17}H_{18}D_3NO \bullet HCl$
FW: 294.8
Chemical Purity: ≥95% (Atomoxetine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤1% d_0
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

Atomoxetine-d_3 (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-d_3 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the atomoxetine-d_3 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Atomoxetine-d_3 (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).

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