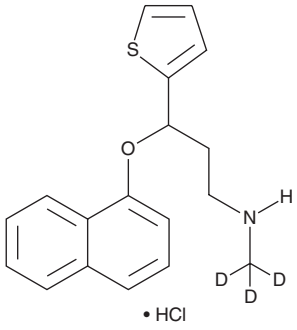
PRODUCT INFORMATION

Duloxetine-d_3 (hydrochloride)

Item No. 25229

CAS Registry No.:	1188266-11-6
Formal Name:	N-(methyl-d_3)-3-(naphthalen-1-yloxy)-3-(thiophen-2-yl)propan-1-amine, monohydrochloride
Synonym:	LY248686-d_3
MF:	$C_{18}H_{16}D_3NOS \bullet HCl$
FW:	336.9
Chemical Purity:	≥98% (Duloxetine)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as:	A solid
Storage:	4°C
Stability:	≥4 years



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

Laboratory Procedures

Duloxetine-d_3 (hydrochloride) is intended for use as an internal standard for the quantification of duloxetine (Item No. 14317) 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).

Description

(S)-Duloxetine is a potent inhibitor of serotonin and norepinephrine reuptake (K_is = 4.6 and 15.6 nM, respectively, for rat synaptosomes).[1] It also inhibits dopamine reuptake (K_i = 369 nM). (S)-Duloxetine suppresses spontaneous firing activity *in vivo* in the dorsal raphe and locus coeruleus (ED_{50}s = 99 and 475 µg/kg, respectively).[2] It also decreases immobility time and increases latency to first immobility in the forced swim test in mice when administered at doses of 16 and 32 mg/kg.[3] Formulations containing (S)-duloxetine have been used in the treatment of major depressive disorder, generalized anxiety disorder, chronic neuropathic and musculoskeletal pain, and fibromyalgia.

References

1. Wong, D.T., Bymaster, F.P., Mayle, D.A., *et al.* LY248686, a new inhibitor of serotonin and norepinephrine uptake. *Neuropsychopharmacology* **8(1)**, 23-33 (1993).
2. Kasamo, K., Blier, P., and De Montigny, C. Blockade of the serotonin and norepinephrine uptake processes by duloxetine: *In vitro* and *in vivo* studies in the rat brain. *J. Pharmacol. Exp. Ther.* **277(1)**, 278-286 (1996).
3. Castagné, V., Porsolt, R.D., and Moser, P. Use of latency to immobility improves detection of antidepressant-like activity in the behavioral despair test in the mouse. *Eur. J. Pharmacol.* **616(1-3)**, 128-133 (2009).

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