

# PRODUCT INFORMATION



## Nefazodone-d<sub>6</sub> (hydrochloride)

Item No. 34264

**CAS Registry No.:** 1330236-06-0  
**Formal Name:** 2-[3-[4-(3-chlorophenyl)-1-piperazinyl]propyl-1,1,2,2,3,3,3-d<sub>6</sub>]-5-ethyl-2,4-dihydro-4-(2-phenoxyethyl)-3H-1,2,4-triazol-3-one, monohydrochloride

**MF:** C<sub>25</sub>H<sub>26</sub>ClD<sub>6</sub>N<sub>5</sub>O<sub>2</sub> • HCl

**FW:** 512.5

**Chemical Purity:** ≥95% (Nefazodone)

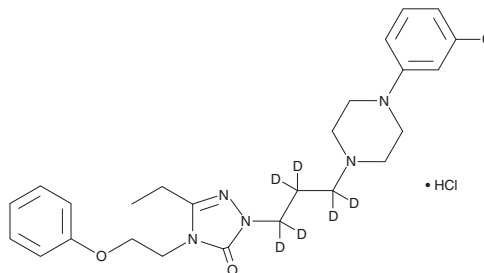
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>6</sub>); ≤1% d<sub>0</sub>

**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

Nefazodone-d<sub>6</sub> (hydrochloride) is intended for use as an internal standard for the quantification of nefazodone (Item No. 10012642) 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).

Nefazodone-d<sub>6</sub> (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the nefazodone-d<sub>6</sub> (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Nefazodone-d<sub>6</sub> (hydrochloride) is soluble in methanol and DMSO.

### Description

Nefazodone is a serotonin (5-HT), norepinephrine, and dopamine reuptake inhibitor (SNDRI; K<sub>i</sub>s = 137, 570, 2,380 nM, respectively, in rat brain synaptosomes).<sup>1</sup> It is also an antagonist of 5-HT<sub>2A</sub>, 5-HT<sub>1A</sub>, and histamine H<sub>1</sub> receptors, as well as α<sub>1</sub>- and α<sub>2</sub>-adrenergic receptors (α<sub>2</sub>-ARs; K<sub>i</sub>s = 7.1, 52, 30, 5.5, and 84 nM, respectively).<sup>2</sup> Nefazodone (100 mg/kg) reduces immobility time in the tail suspension test in gerbils.<sup>3</sup> However, it is toxic to isolated human hepatocytes in a cultured sandwich hepatocyte preparation when used at a concentration of 30 μM.<sup>4</sup> Formulations containing nefazodone have previously been used in the treatment of depression.

### References

1. Carlier, P.R., Lo, M.M.-C., Lo, P.C.-K., *et al.* Synthesis of a potent wide-spectrum serotonin-, norepinephrine-, dopamine-reuptake inhibitor (SNDRI) and a species-selective dopamine-reuptake inhibitor based on the gamma-amino alcohol functional group. *Bioorg. Med. Chem. Lett.* **8**(5), 487-492 (1998).
2. Owens, M.J., Neal, W., Plott, S.J., *et al.* Neurotransmitter receptor and transporter binding profile of antidepressants and their metabolites. *J. Pharmacol. Exp. Ther.* **283**(3), 1305-1322 (1997).
3. Varty, G.B., Cohen-Williams, M.E., and Hunter, J.C. The antidepressant-like effects of neurokinin NK1 receptor antagonists in a gerbil tail suspension test. *Behav. Pharmacol.* **14**(1), 87-95 (2003).
4. Kostrubsky, S.E., Strom, S.C., Kalgutkar, A.S., *et al.* Inhibition of hepatobiliary transport as a predictive method for clinical hepatotoxicity of nefazodone. *Toxicol. Sci.* **90**(2), 451-459 (2006).

#### 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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