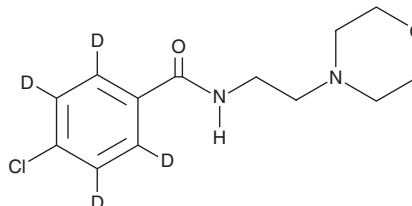


# PRODUCT INFORMATION



## Moclobemide-d<sub>4</sub> Item No. 34247

**CAS Registry No.:** 2929883-33-8  
**Formal Name:** 4-chloro-N-[2-(4-morpholinyl)ethyl]-  
benzamide-2,3,5,6-d<sub>4</sub>  
**MF:** C<sub>13</sub>H<sub>13</sub>D<sub>4</sub>ClN<sub>2</sub>O<sub>2</sub>  
**FW:** 272.8  
**Chemical Purity:** ≥98% (Moclobemide)  
**Deuterium  
Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</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

Moclobemide-d<sub>4</sub> is intended for use as an internal standard for the quantification of moclobemide (Item No. 24361) 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).

Moclobemide-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the moclobemide-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Moclobemide-d<sub>4</sub> is soluble in methanol.

### Description

Moclobemide is a reversible inhibitor of monoamine oxidase A (MAO-A; K<sub>i</sub> = 0.005 μM).<sup>1</sup> It is selective for MAO-A over MAO-B (K<sub>i</sub> = 1.08 μM). Chronic administration of moclobemide (15 mg/kg) decreases immobility in the forced swim test in rats.<sup>2</sup> It increases time spent in the open arms of the elevated plus maze in rats, indicating anxiolytic-like activity, when administered chronically at a dose of 20 mg/kg.<sup>3</sup> Formulations containing moclobemide have been used in the treatment of major depressive disorder, bipolar disorder, and social anxiety.

### References

- Jagrat, M., Behera, J., Yabanoglu, S., *et al.* Pyrazoline based MAO inhibitors: Synthesis, biological evaluation and SAR studies. *Bioorg. Med. Chem. Lett.* **21(14)**, 4296-4300 (2011).
- Cryan, J.F., Page, M.E., and Lucki, I. Differential behavioral effects of the antidepressants reboxetine, fluoxetine, and moclobemide in a modified forced swim test following chronic treatment. *Psychopharmacol. (Berl)*. **182(3)**, 335-44 (2005).
- Frank, M. and Braszko, J.J. Moclobemide enhances aversively motivated learning and memory in rats. *Pol. J. Pharmacol.* **51(6)**, 497-503 (1999).

#### 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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