

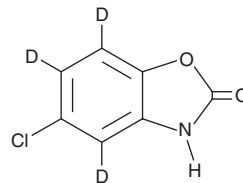
# PRODUCT INFORMATION



## Chlorzoxazone-d<sub>3</sub>

Item No. 34237

**CAS Registry No.:** 1185173-60-7  
**Formal Name:** 5-chloro-2(3H)-benzoxazolone-4,6,7-d<sub>3</sub>  
**MF:** C<sub>7</sub>HClD<sub>3</sub>NO<sub>2</sub>  
**FW:** 172.6  
**Chemical Purity:** ≥98% (Chlorzoxazone)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</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

Chlorzoxazone-d<sub>3</sub> is intended for use as an internal standard for the quantification of chlorzoxazone (Item No. 18869) 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).

Chlorzoxazone-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the chlorzoxazone-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Chlorzoxazone-d<sub>3</sub> is soluble in organic solvents such as methanol, DMSO, and acetonitrile.

### Description

Chlorzoxazone is a centrally acting muscle relaxant and an activator of small and intermediate conductance calcium-activated potassium channels (EC<sub>50</sub>s = 87 and 98 μM for K<sub>Ca</sub>2.2 and K<sub>Ca</sub>3.1, respectively).<sup>1,2</sup> *In vivo*, chlorzoxazone (10 mg/kg) decreases alcohol, but not water, intake in a dose-dependent manner and reduces the propensity for rapid initial alcohol intake in rats with intermittent, but not continuous, access to alcohol.<sup>3</sup> Formulations containing chlorzoxazone have been used in the treatment of pain and stiffness caused by muscle spasm.

### References

1. Pedarzani, P. and Stocker, M. Molecular and cellular basis of small- and intermediate-conductance, calcium-activated potassium channel function in the brain. *Cell. Mol. Life Sci.* **65(20)**, 3196-3217 (2008).
2. Gao, Z., Todorov, B., Barrett, C.F., *et al.* Cerebellar ataxia by enhanced Ca<sub>v</sub>2.1 currents is alleviated by Ca<sup>2+</sup>-dependent K<sup>+</sup>-channel activators in *Cacna1a*<sup>S218L</sup> mutant mice. *J. Neurosci.* **32(44)**, 15533-15546 (2012).
3. Hopf, F.W., Simms, J.A., Chang, S.-J., *et al.* Chlorzoxazone, an SK-type potassium channel activator used in humans, reduces excessive alcohol intake in rats. *Biol. Psychiatry* **69(7)**, 618-624 (2011).

#### 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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