

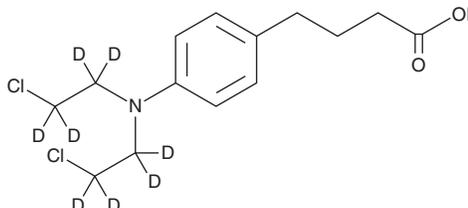
# PRODUCT INFORMATION



## Chlorambucil-d<sub>8</sub>

Item No. 26774

**CAS Registry No.:** 2748247-26-7  
**Formal Name:** 4-[bis(2-chloroethyl)amino-d<sub>8</sub>]-benzenebutanoic acid  
**MF:** C<sub>14</sub>H<sub>11</sub>D<sub>8</sub>Cl<sub>2</sub>NO<sub>2</sub>  
**FW:** 312.3  
**Chemical Purity:** ≥98% (Chlorambucil)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>8</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

Chlorambucil-d<sub>8</sub> is intended for use as an internal standard for the quantification of chlorambucil (Item No. 23744) 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).

Chlorambucil-d<sub>8</sub> is supplied as a solid. A stock solution may be made by dissolving the chlorambucil-d<sub>8</sub> in the solvent of choice, which should be purged with an inert gas. Chlorambucil-d<sub>8</sub> is slightly soluble in chloroform and methanol.

### Description

Chlorambucil is a DNA alkylating agent.<sup>1</sup> It induces DNA cross-linking *in vitro* when used at a concentration of 1 mg/ml and preferentially targets guanine-rich regions. Chlorambucil (8 and 15 mg/kg) is teratogenic *in vivo*, reducing fetal brain size and inducing microcephaly when administered to pregnant mice.<sup>2</sup> Formulations containing chlorambucil have been used in the treatment of various cancers.

### References

1. Mohamed, D., Mowaka, S., Thomale, J., *et al.* Chlorambucil-adducts in DNA analyzed at the oligonucleotide level using HPLC-ESI MS. *Chem. Res. Toxicol.* **22**(8), 1435-1446 (2009).
2. Tanaka, O., Yoshioka, N., Yoshioka, T., *et al.* Effects of chlorambucil on the brain development in mice during post-neurulation period. *Congenit. Anom. (Kyoto)* **31**(3), 141-152 (1991).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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