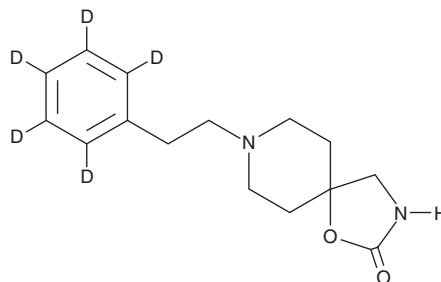


# PRODUCT INFORMATION



## Fenspiride-d<sub>5</sub> Item No. 33711

**CAS Registry No.:** 1246911-67-0  
**Formal Name:** 8-(phenethyl-d<sub>5</sub>)-1-oxa-3,8-diazaspiro[4.5] decan-2-one  
**Synonym:** Decaspiride-d<sub>5</sub>  
**MF:** C<sub>15</sub>H<sub>15</sub>D<sub>5</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 265.4  
**Chemical Purity:** ≥98% (Fenspiride)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</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

Fenspiride-d<sub>5</sub> is intended for use as an internal standard for the quantification of fenspiride (hydrochloride) (Item No. 25512) 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).

Fenspiride-d<sub>5</sub> is supplied as a solid. A stock solution may be made by dissolving the fenspiride-d<sub>5</sub> in the solvent of choice, which should be purged with an inert gas. Fenspiride-d<sub>5</sub> is soluble in methanol and DMSO.

### Description

Fenspiride is an antagonist of histamine H<sub>1</sub> receptors and a non-steroidal anti-inflammatory drug (NSAID).<sup>1,2</sup> It inhibits histamine-induced contraction of isolated guinea pig trachea but not histamine-induced inotropy of isolated guinea pig heart. It also inhibits phosphodiesterase 4 (PDE4), PDE5, and PDE3 (IC<sub>50</sub>s = 69, ~158, and 363 μM, respectively, in isolated human bronchi derived from patients with lung cancer).<sup>3</sup> It is selective for these phosphodiesterases over PDE1 and PDE2, where it provides less than 25% inhibition. Fenspiride potentiates the airway relaxant effects of isoproterenol (Item No. 15592) and sodium nitroprusside indicating an effect on cAMP and cGMP phosphodiesterases, respectively. Aerosolized fenspiride (1 mg/ml) reverses bronchoconstriction induced by capsaicin and, when used at aerosolized concentrations ranging from 1-10 mg/ml, reduces cough induced by citric acid in a guinea pig model of cough.<sup>2</sup>

### References

1. Rognoni, F., Marchini, F., Piacenza, G., *et al.* Effect of 8-N-phenethyl-1-oxa-2-oxo-3,8-diazaspiro(4,5) decane hydrochloride (decaspiride) on histamine receptors. *Boll. Chim. Farm.* **117(7)**, 397-401 (1978).
2. Laude, E.A., Bee, D., Crambes, O., *et al.* Antitussive and antibronchoconstriction actions of fenspiride in guinea-pigs. *Eur. Respir. J.* **8(10)**, 1699-1704 (1995).
3. Cortijo, J., Naline, E., Ortiz, J.L., *et al.* Effects of fenspiride on human bronchial cyclic nucleotide phosphodiesterase isoenzymes: Functional and biochemical study. *Eur. J. Pharmacol.* **341(1)**, 79-86 (1998).

#### 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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