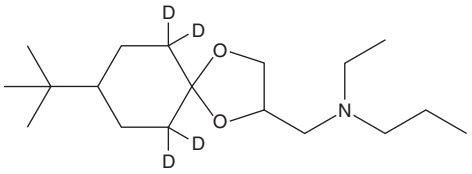
PRODUCT INFORMATION

Spiroxamine-d_4

Item No. 39604

CAS Registry No.: 2469272-82-8
Formal Name: 8-(1,1-dimethylethyl)-N-ethyl-N-propyl-1,4-dioxaspiro[4.5]decane-2-methanamine-6,6,10,10-d_4
MF: $C_{18}H_{31}D_4NO_2$
FW: 301.5
Chemical Purity: ≥95% (Spiroxamine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A neat oil
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Spiroxamine-d_4 is intended for use as an internal standard for the quantification of spiroxamine (Item No. 25823) 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).

Spiroxamine-d_4 is supplied as a neat oil. A stock solution may be made by dissolving the spiroxamine-d_4 in the solvent of choice, which should be purged with an inert gas. Spiroxamine-d_4 is slightly soluble in chloroform and methanol.

Description

Spiroxamine is a tertiary amine fungicide.[1] It inhibits the growth of *N. parvum*, *B. dothidea*, *D. seriata*, and *L. theobromae* isolates from grape vines (EC_{50}s = 0.97-10.28 mg/L).[2] Spiroxamine reduces mean firing and burst rates in rat cortical cultures (EC_{50}s = 90 and 110 nM, respectively).[3] It is also cytotoxic to MDA-kb2 breast cancer cells (EC_{20} = 9.29 µM).[4]

References

1. Sui, G., Zhang, W., Zhou, K., *et al.* Trialkylamine derivatives containing a triazole moiety as promising ergosterol biosynthesis inhibitor: Design, synthesis, and antifungal activity. *Chem. Pharm. Bull. (Tokyo)* **65(1)**, 82-89 (2017).
2. Amponsah, N.T., Jones, E., Ridgway, H.J., *et al.* Evaluation of fungicides for the management of Botryosphaeria dieback diseases of grapevines. *Pest Manag. Sci.* **68(5)**, 676-683 (2012).
3. Frank, C.L., Brown, J.P., Wallace, K., *et al.* Developmental neurotoxicants disrupt activity in cortical networks on microelectrode arrays: Results of screening 86 compounds during neural network formation. *Toxicol. Sci.* **160(1)**, 121-135 (2017).
4. Orton, F., Rosivatz, E., Scholze, M., *et al.* Widely used pesticides with previously unknown endocrine activity revealed as *in vitro* antiandrogens. *Environ. Health Perspect.* **119(6)**, 794-800 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM