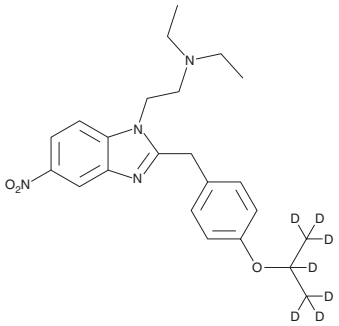
PRODUCT INFORMATION

Isotonitazene-d_7

Item No. 29319

Formal Name:	N,N-diethyl-2-(5-nitro-2-(4-((propan-2-yl-d_7)oxy)benzyl)-1H-benzo[d]imidazol-1-yl)ethan-1-amine
MF:	$C_{23}H_{23}D_7N_4O_3$
FW:	417.6
Chemical Purity:	≥98% (Isotonitazene)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_7); ≤1% d_0
UV/Vis.:	λ_{max}: 242, 310 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥5 years



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

Description

Isotonitazene-d_7 (Item No. 29319) is intended for use as an internal standard for the quantification of isotonitazene (Item Nos. 30880 | 27255) 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).

Isotonitazene is categorized as an opioid.[1-3] Isotonitazene has analgesic effects in mice.[4] It has been associated with overdoses.[5] Isotonitazene is regulated as a Schedule I compound in the United States. This product is intended for research and forensic applications.

References

1. Casy, A.F. and Wright, J. Ionisation constants and partition coefficients of some analgesically active 2-benzylbenzimidazole derivatives and related compounds. *J. Pharm. Pharmacol.* **18(10)**, 677-683 (1966).
2. Blanckaert, P., Cannaert, A., Van Uytfanghe, K., *et al.* Report on a novel emerging class of highly potent benzimidazole NPS opioids: Chemical and *in vitro* functional characterization of isotonitazene. *Drug Test. Anal.* **12(4)**, 422-430 (2019).
3. Vandeputte, M.M., Van Uytfanghe, K., Layle, N.K., *et al.* Synthesis, chemical characterization, and μ-opioid receptor activity assessment of the emerging group of "nitazene" 2-benzylbenzimidazole synthetic opioids. *ACS Chem. Neurosci.* **12(7)**, 1241-1251 (2021).
4. Ujváry, I., Christie, R., Evans-Brown, M., *et al.* DARK classics in chemical neuroscience: Etonitazene and related benzimidazoles. *ACS Chem. Neurosci.* **12(7)**, 1072-1092 (2021).
5. Shover, C.L., Falasinnu, T.O., Freedman, R.B., *et al.* Emerging characteristics of isotonitazene-involved overdose deaths: A case-control study. *J. Addict. Med.* **15(5)**, 429-431 (2021).

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