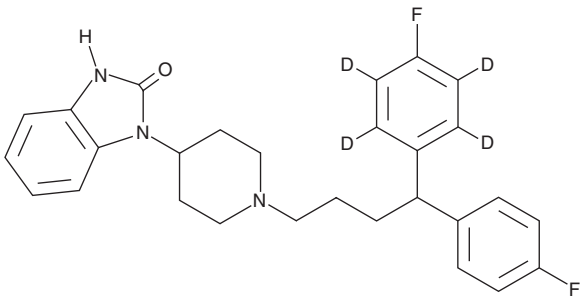
PRODUCT INFORMATION

Pimozide-d_4

Item No. 28617

CAS Registry No.:	1803193-57-8
Formal Name:	1-[1-[4-(4-fluorophenyl)-4-(4-fluorophenyl-2,3,5,6-d_4)butyl]-4-piperidinyl]-1,3-dihydro-2H-benzimidazol-2-one
MF:	$C_{28}H_{25}D_4F_2N_3O$
FW:	465.6
Chemical Purity:	≥98% (Pimozide)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
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

Pimozide-d_4 is intended for use as an internal standard for the quantification of pimozide (Item No. 16222) 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).

Pimozide-d_4 is supplied as a solid. A stock solution may be made by dissolving the pimozide-d_4 in the solvent of choice, which should be purged with an inert gas. Pimozide-d_4 is soluble in a 1:1 solution of acetonitrile:methanol.

Description

Pimozide-d_4 is an internal standard for the quantification of pimozide (Item No. 16222) by GC- or LC-MS. Pimozide is a dopamine receptor antagonist (K_is = 2.4, 0.3, and 1.8 nM for D_2, D_3, and D_4 receptors, respectively).[1] It also binds to eight additional receptors (K_ds = 25-3,100 nM for the human receptors) and inhibits the voltage-gated sodium channel $Na_v1.2$ and the voltage-gated potassium channel $K_v11.1$ (IC_{50}s = 42 and 340 nM, respectively).[2-4] Pimozide (0.5, 1, and 2 mg/kg) decreases the number of licks and reduces fluid intake of a sweetened solution in rats.[5] It decreases the number of threats and attacks and increases immobility time in the neutral arena aggression test, indicating increased passiveness, in male mice when administered at a dose of 0.75 mg/kg for 10 days.[6] Formulations containing pimozide have been used in the treatment of Tourette syndrome.

References

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3. Roufos, I., Hay, S., and Schwarz, R.D. *J. Med. Chem.* **39(7)**, 1514-1520 (1996).
4. Lau, J.F., Jeppesen, C.B., Rimvall, K., *et al. Bioorg. Med. Chem. Lett.* **16(20)**, 5303-5308 (2006).
5. Xenakis, S. and Sclafani, A. *Pharmacol. Biochem. Behav.* **15(3)**, 435-442 (1980).
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