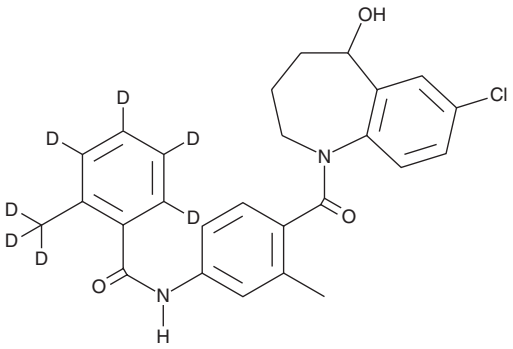
PRODUCT INFORMATION

Tolvaptan-d_7

Item No. 26453

CAS Registry No.:	1246818-18-7
Formal Name:	N-[4-[(7-chloro-2,3,4,5-tetrahydro-5-hydroxy-1H-1-benzazepin-1-yl) carbonyl]-3-methylphenyl]-6-(methyl-d_3)-benzamide-2,3,4,5-d_4
MF:	$C_{26}H_{18}ClD_7N_2O_3$
FW:	456.0
Chemical Purity:	≥98% (Tolvaptan)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_7); ≤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

Tolvaptan-d_7 is intended for use as an internal standard for the quantification of tolvaptan (Item No. 19691) 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).

Tolvaptan-d_7 is supplied as a solid. A stock solution may be made by dissolving the tolvaptan-d_7 in the solvent of choice, which should be purged with an inert gas. Tolvaptan-d_7 is slightly soluble in DMSO and methanol.

Description

Tolvaptan is a nonpeptide vasopressin V_2 receptor antagonist (IC_{50} = 3 nM for rat receptor) and a diuretic agent.[1] It is selective for V_2 over V_1 receptors (IC_{50} = 0.58 µM). Tolvaptan increases urine volume by 3-fold in rats when administered at a dose of 0.54 mg/kg. It also reduces left ventricular end-systolic volumes and improves left ventricular ejection fraction in a rat model of myocardial infarction.[2] Formulations containing tolvaptan have been used to treat hyponatremia.

References

1. Kondo, K., Ogawa, H., Yamashita, H., *et al.* 7-Chloro-5-hydroxy-1-[2-methyl-4-(2-methylbenzoyl-amino) benzoyl]-2,3,4,5-tetrahydro-1H-1-benzazepine (OPC-41061): A potent, orally active nonpeptide arginine vasopressin V_2 receptor antagonist. *Bioorg. Med. Chem.* **7(8)**, 1743-1754 (1999).
2. Yamazaki, T., Nakamura, Y., Shiota, M., *et al.* Tolvaptan attenuates left ventricular fibrosis after acute myocardial infarction in rats. *J. Pharmacol. Sci.* **123(1)**, 58-66 (2013).

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