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## Product Data Sheet

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Product Name: Acebutolol D7

Cat. No.: GC60552

### Chemical Properties

Cas. No. 2701782-36-5

SMILES CCCC(NC1=CC=C(OCC(O)CNC(C([2H]))([2H])[2H])([2H])C([2H])([2H])[2H])C(C(C)=O)=C1)=OFormula C<sub>18</sub>H<sub>21</sub>D<sub>7</sub>N<sub>2</sub>O<sub>4</sub> M.Wt 343.47

Solubility Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure 

### Background

Acebutolol-d<sub>7</sub> is intended for use as an internal standard for the quantification of acebutolol by GC- or LC-MS. Acebutolol is an antagonist of β<sub>1</sub>-adrenergic receptors (β<sub>1</sub>-ARs; K<sub>i</sub> = 125 nM).<sup>1</sup> It is selective for β<sub>1</sub>- over β<sub>2</sub>-ARs (K<sub>i</sub> = 7,070 nM). *In vivo*, acebutolol decreases isoprenaline-induced tachycardia and diastolic hypotension in cats (ED<sub>50</sub> = 0.09 mg/kg for both).<sup>2</sup> Acebutolol (12.5, 25, and 50 mg/kg) inhibits ouabain-induced arrhythmias in rabbits, as well as protects against chloroform-induced ventricular fibrillation in mice (ED<sub>50</sub> = 0.067 mg/kg).<sup>3</sup> Formulations containing acebutolol have been used in the treatment of angina and irregular heartbeat.

1. Tsuchihashi, H., Nakashima, Y., Kinami, J., et al. Characteristics of 125I-iodocyanopindolol binding to β-adrenergic and serotonin-1B receptors of rat brain: Selectivity of β-adrenergic agents Jpn. J. Pharmacol. 52(2)195-200(1990) 2. Basil, B., Jordan, R., Loveless, A.H., et al. β-Adrenoceptor blocking properties and cardioselectivity of M & B 17,803A Br. J. Pharmacol. 48(2)198-211(1973) 3. Basil, B., Jordan, R., Loveless,

**Caution: Product has not been fully validated for medical applications. For research use only.**

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A.H., et al. A comparison of the experimental anti-arrhythmic properties of acebutolol (M and B 17,803), propranolol and practolol. Br. J. Pharmacol. 50(3)323-333(1974)

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