

Product Data Sheet

Product Name: Brimonidine-d4

Cat. No.: GC40077

Chemical Properties

Cas. No. 1184971-51-4

SMILES BrC1=C(NC2=NC([2H])([2H])C([2H])([2H])N2)C=CC3=C1N=CC=N3

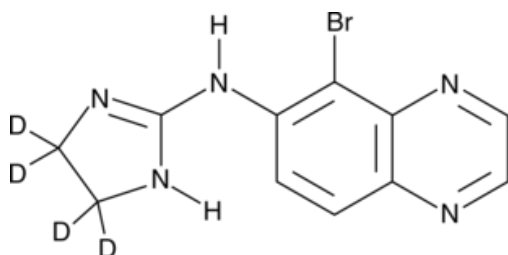
Formula C₁₁H₆BrD₄N₅ M.Wt 296.2

Solubility DMSO: soluble, Water: 1.5 mg/ml 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

Brimonidine-d4 is intended for use as an internal standard for the quantification of brimonidine by GC- or LC-MS. Brimonidine is an agonist of α_2 -adrenergic receptors (α_2 -ARs; K_{is} = 2.7, 52, and 44 nM for α_2A , α_2B , and α_2C -ARs, respectively, in CHO cells). It is selective for α_2 -ARs over α_1 -ARs (K_i = 1,800 nM in human brain). Brimonidine lowers intraocular pressure in DBA/2J mice, a model of glaucoma, to control levels when applied topically to the eye as a 0.1% solution. It also inhibits glutamate release, prevents upregulation of NMDA receptors containing NR1 and NR2A subunits, and protects rat retinal ganglion cells against glutamate excitotoxicity in a rat model of retinal ischemia when administered at a dose of 1 mg/kg per day. Formulations containing brimonidine have been used in the treatment of open-angle glaucoma and ocular hypertension.

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

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