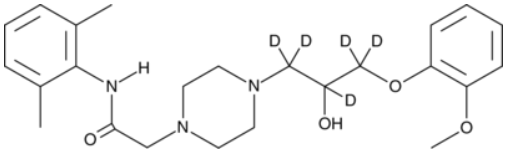
Product Data Sheet

Product Name: Ranolazine-d5
Cat. No.: GC40235

Chemical Properties

Cas. No.	1092804-87-9		
SMILES	OC(C([2H])([2H])OC1=C(OC)C=CC=C1)([2H])C([2H])([2H])N2CCN(CC(NC3=C(C)C=CC=C3C)=O)CC2		
Formula	C24H28D5N3O4	M.Wt	432.6
Solubility	Dichloromethane: Soluble,Methanol: Soluble	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

Ranolazine-d5 is intended for use as an internal standard for the quantification of ranolazine by GC- or LC-MS. Ranolazine is a piperazine derivative with cardioprotective activity. It reduces the late sodium current (INa) in mouse myocytes expressing the long QT syndrome 3 mutant sodium channel DKPQ, ventricular myocytes isolated from a canine model of heart failure, guinea pig ventricular myocytes exposed to hydrogen peroxide or anemone toxin-II, and HEK293 cells expressing human Nav1.5 channels (IC50s = 5.9-15 μM) as well as the late potassium current (IKr) in canine ventricular myocytes and HEK293 cells (IC50s = 11.5 and 14.4 μM, respectively). Ranolazine also inhibits radioligand binding to α1-, β1-, and β2-adrenergic receptors (Kis = 8.2-19.5, 1.4-8.6, and 0.5-14.8 μM, respectively). In vivo, ranolazine (480 μg/kg per min) reduces clofilium-induced prolongation of the QTc interval and Torsade de Pointes (TdP) in rabbits. Ranolazine also reduces interstitial collagen deposition as well as atrial natriuretic peptide , connective tissue growth factor (CTGF), brain natriuretic peptide , and matrix metalloproteinase-2 (MMP-2) mRNA levels, and prevents left

ventricular dilation in a mouse model of cardiotoxicity induced by doxorubicin .