

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=C(C=C3C)=O)CC2

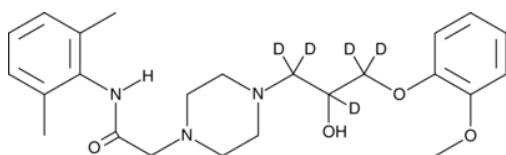
Formula C₂₄H₂₈D₅N₃O₄ M.Wt 432.6

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 (I_{Na}) 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 (I_{Kr}) 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 (K_is = 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

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

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

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