
Product Data Sheet

Product Name: Dxd-D5
Cat. No.: GC62212

Chemical Properties

Cas. No.

Formula $C_{26}H_{19}D_5FN_3O_6$ M.Wt 498.51

Solubility DMSO : 100 mg/mL (200.60 mM; ultrasonic and warming and heat to 60°C) Storage 4°C, away from moisture and light

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

Dxd-D5 (Exatecan-D5 derivative for ADC) is a deuterium labeled Dxd. Dxd is a potent DNA topoisomerase I inhibitor, with an IC₅₀ of 0.31 μM, used as a conjugated drug of HER2-targeting ADC (DS-8201a) [1].

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[2].

[1]. Ogitani Y, et al. DS-8201a, A Novel HER2-Targeting ADC with a Novel DNA Topoisomerase I Inhibitor, Demonstrates a Promising Antitumor Efficacy with Differentiation from T-DM1. Clin Cancer Res. 2016 Oct 15;22(20):5097-5108.

[2]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

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