Product Data Sheet

Product Name: Lapatinib-d4
Cat. No.: GC67759

Chemical Properties

Cas. No.	1184263-99-7		
Formula	$C_{29}H_{22}D_4ClFN_4O_4S$	M.Wt	585.08
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Lapatinib-d4		

Background

Lapatinib-d4 (GW572016-d4) is the deuterium labeled Lapatinib . Lapatinib is a potent inhibitor of the **ErbB-2** and **EGFR** tyrosine kinase domains with **IC_{50}** values against purified **EGFR** and **ErbB-2** of 10.2 and 9.8 nM, respectively[1][2].

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[1].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.
[2]. Rusnak DW, et al. The effects of the novel, reversible epidermal growth factor receptor/ErbB-2 tyrosine kinase inhibitor, GW2016, on the growth of human normal and tumor-derived cell lines in vitro and in vivo. Mol Cancer Ther. 2001 Dec;1(2):85-94.

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