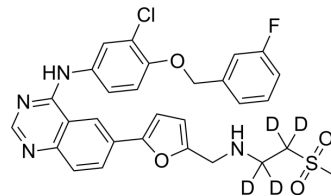


Lapatinib-d₄

Cat. No.:	HY-50898S		
CAS No.:	1184263-99-7		
Molecular Formula:	C ₂₉ H ₂₂ D ₄ ClFN ₄ O ₄ S		
Molecular Weight:	585.08		
Target:	EGFR; Autophagy; Ferroptosis		
Pathway:	JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Autophagy; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (213.65 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.7092 mL	8.5458 mL	17.0917 mL
	5 mM	0.3418 mL	1.7092 mL	3.4183 mL
	10 mM	0.1709 mL	0.8546 mL	1.7092 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Lapatinib-d₄ is the deuterium labeled [Lapatinib](#) (HY-50898). Lapatinib is a potent inhibitor of the ErbB-2 and EGFR tyrosine kinase domains with IC₅₀ values against purified EGFR and ErbB-2 of 10.2 and 9.8 nM, respectively[1][2].

In Vitro

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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[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.

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

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