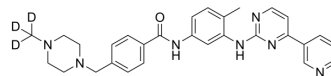


Imatinib-d₃ hydrochloride

Cat. No.:	HY-15463S2		
CAS No.:	1134803-18-1		
Molecular Formula:	C ₂₉ H ₂₈ D ₃ N ₇ O		
Molecular Weight:	496.62		
Target:	Autophagy; Bcr-Abl; c-Kit; SARS-CoV; PDGFR		
Pathway:	Autophagy; Protein Tyrosine Kinase/RTK; Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Imatinib-d ₃ (hydrochloride) is the deuterium labeled Imatinib. Imatinib (STI571) is an orally bioavailable tyrosine kinases inhibitor that selectively inhibits BCR/ABL, v-Abl, PDGFR and c-kit kinase activity. Imatinib (STI571) works by binding close to the ATP binding site, locking it in a closed or self-inhibited conformation, therefore inhibiting the enzyme activity of the protein semicompetitively. Imatinib also is an inhibitor of SARS-CoV and MERS-CoV.
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;53(2):211-216.
- [2]. Iqbal N, et al. Imatinib: a breakthrough of targeted therapy in cancer. *Chemother Res Pract*. 2014;2014:357027.
- [3]. Coleman CM, et al, Frieman MB. Abelson Kinase Inhibitors Are Potent Inhibitors of Severe Acute Respiratory Syndrome Coronavirus and Middle East Respiratory Syndrome Coronavirus Fusion. *J Virol*. 2016;90(19):8924-8933. Published 2016 Sep 12.

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

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