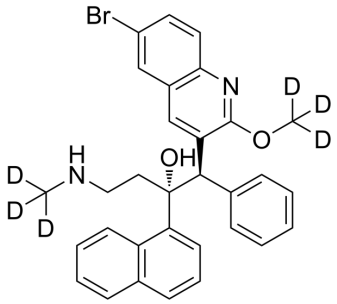
Bedaquiline impurity 2-d_6

Cat. No.:	HY-14881S2
Molecular Formula:	$C_{31}H_{23}D_6BrN_2O_2$
Molecular Weight:	547.52
Target:	Bacterial; Antibiotic; Isotope-Labeled Compounds
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Bedaquiline impurity 2-d_6 is deuterium labeled Bedaquiline. Bedaquiline (TMC207) is a diarylquinoline agent and inhibits Mycobacterium tuberculosis (Mtb) F1FO-ATP synthase through targeting of both the c- and the ε-subunit[1]. Bedaquiline has uncoupler activity. Bedaquiline is used for the multi-agent resistant tuberculosis[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;53(2):211-216.

[2]. Chahine EB, et al. Bedaquiline: a novel diarylquinoline for multidrug-resistant tuberculosis. Ann Pharmacother. 2014 Jan;48(1):107-15.

[3]. Jang JC, et al. Bedaquiline susceptibility test for totally drug-resistant tuberculosis Mycobacterium tuberculosis. J Microbiol. 2017 Apr 20.

[4]. Pang Y, et al. In Vitro Activity of Bedaquiline against Nontuberculous Mycobacteria in China. Antimicrob Agents Chemother. 2017 Apr 24;61(5).

[5]. Sarathy JP, et al. TBAJ-876 displays Bedaquiline-like mycobactericidal potency without retaining the parental drug's uncoupler activity. Antimicrob Agents Chemother. 2019 Nov 11.

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