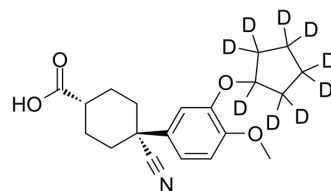


## Cilomilast-d9

Cat. No.:	HY-10790S
CAS No.:	1794779-92-2
Molecular Formula:	C <sub>20</sub> H <sub>16</sub> D <sub>9</sub> NO <sub>4</sub>
Molecular Weight:	352.47
Target:	Phosphodiesterase (PDE)
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Cilomilast-d9 (SB-207499-d9) is the deuterium labeled Cilomilast. Cilomilast (SB-207499) is a potent, selective and orally active inhibitor of Phosphodiesterase 4 (PDE4), with IC <sub>50</sub> s of ~100 and 120 nM for LPDE4 and HPDE4, respectively. Cilomilast shows selectivity for PDE4 over PDE1, PDE2, PDE3 and PDE5 (IC <sub>50</sub> =74, 65, >100, and 83 μM, respectively). Cilomilast has anti-inflammatory and immunomodulatory effects and can be used for the research of asthma and chronic obstructive pulmonary disease (COPD) <sup>[1][2][3][4]</sup> .
<b>In Vitro</b>	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 <sup>[1]</sup> . 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]. Griswold DE, et al. SB 207499 (Ariflo), a second generation phosphodiesterase 4 inhibitor, reduces tumor necrosis factor alpha and interleukin-4 production in vivo. *J Pharmacol Exp Ther.* 1998 Nov;287(2):705-11.
- [3]. Hatzelmann A, et al. Anti-inflammatory and immunomodulatory potential of the novel PDE4 inhibitor roflumilast in vitro. *J Pharmacol Exp Ther.* 2001 Apr;297(1):267-79.
- [4]. Barnette MS, et al. SB 207499 (Ariflo), a potent and selective second-generation phosphodiesterase 4 inhibitor: in vitro anti-inflammatory actions. *J Pharmacol Exp Ther.* 1998 Jan;284(1):420-6.

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

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