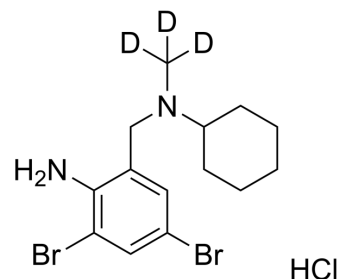


Bromhexine-d₃ hydrochloride

Cat. No.:	HY-B0372AS
Molecular Formula:	C ₁₄ H ₁₈ D ₃ Br ₂ ClN ₂
Molecular Weight:	415.61
Target:	Autophagy; SARS-CoV; HIV; Isotope-Labeled Compounds
Pathway:	Autophagy; Anti-infection; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	Bromhexine-d ₃ (hydrochloride) is deuterium labeled Bromhexine (hydrochloride). Bromhexine hydrochloride is a potent and specific TMPRSS2 protease inhibitor with an IC ₅₀ of 0.75 μM. Bromhexine hydrochloride can prevent and manage SARS-CoV-2 infection. Bromhexine hydrochloride is an autophagy agonist. Bromhexine hydrochloride is a mucolytic cough suppressant and has the potential for a range of respiratory conditions[1][2][3][4].
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]. Jared M Lucas, et al. The androgen-regulated protease TMPRSS2 activates a proteolytic cascade involving components of the tumor microenvironment and promotes prostate cancer metastasis. *Cancer Discov.* 2014 Nov;4(11):1310-25.
- [3]. Li Wen Shen, et al. TMPRSS2: A potential target for treatment of influenza virus and coronavirus infections. *Biochimie.* 2017 Nov;142:1-10.
- [4]. Roberto Maggio, et al. Repurposing the mucolytic cough suppressant and TMPRSS2 protease inhibitor bromhexine for the prevention and management of SARS-CoV-2 infection. *Pharmacol Res.* 2020 Jul;157:104837.
- [5]. Santosh Chauhan, et al. Pharmaceutical screen identifies novel target processes for activation of autophagy with a broad translational potential. *Nat Commun.* 2015 Oct 27;6:8620.

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

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