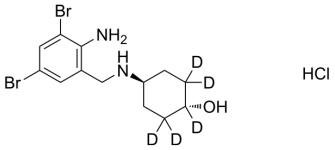
Ambroxol-d_5 hydrochloride

Cat. No.:	HY-B1039AS
CAS No.:	2741380-71-0
Molecular Formula:	$C_{13}H_{14}D_5Br_2ClN_2O$
Molecular Weight:	419.59
Target:	Glucosidase; Autophagy; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Autophagy; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 20 mg/mL (47.67 mM)
DMF : ≥ 20 mg/mL (47.67 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3833 mL	11.9164 mL	23.8328 mL
5 mM	0.4767 mL	2.3833 mL	4.7666 mL
10 mM	0.2383 mL	1.1916 mL	2.3833 mL

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

BIOLOGICAL ACTIVITY

Description

Ambroxol-d_5 (hydrochloride) is the deuterium labeled Ambroxol hydrochloride. Ambroxol hydrochloride (NA-872 hydrochloride), an active metabolite of the proagent Bromhexine, has potent expectorant effects. Ambroxol hydrochloride is a glucocerebrosidase (GCase) chaperone and increases glucocerebrosidase activity. Ambroxol hydrochloride induces lung autophagy and has the potential for Parkinson disease and neuronopathic Gaucher disease research[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;53(2):211-216.

[2]. Vojo Deretic, et al. Enhancement of lung levels of antibiotics by ambroxol and bromhexine. Expert Opin Drug Metab Toxicol. 2019 Mar;15(3):213-218.

[3]. Anna Migdalska-Richards, et al. Ambroxol effects in glucocerebrosidase and α-synuclein transgenic mice. Ann Neurol. 2016 Nov;80(5):766-775.

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