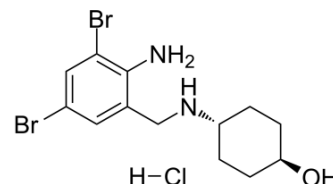


Ambroxol hydrochloride

Cat. No.:	HY-B1039A
CAS No.:	23828-92-4
Molecular Formula:	C ₁₃ H ₁₉ Br ₂ ClN ₂ O
Molecular Weight:	414.56
Target:	Glucosidase; Autophagy
Pathway:	Metabolic Enzyme/Protease; Autophagy
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

H₂O : 8.33 mg/mL (20.09 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4122 mL	12.0610 mL	24.1220 mL
	5 mM	0.4824 mL	2.4122 mL	4.8244 mL
	10 mM	0.2412 mL	1.2061 mL	2.4122 mL

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

BIOLOGICAL ACTIVITY

Description

Ambroxol hydrochloride (NA-872 hydrochloride), an active metabolite of the prodrug 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 Vivo

Ambroxol hydrochloride (NA-872 hydrochloride; 1, 3, 4, 5 mM for 12 consecutive days in drinking water) results in increased brain glucocerebrosidase activity in wild-type mice, transgenic mice expressing the heterozygous L444P mutation in the murine glucocerebrosidase 1 gene, and transgenic mice overexpressing human α -synuclein^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. 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.
- [2]. Anna Migdalska-Richards, et al. Ambroxol effects in glucocerebrosidase and α -synuclein transgenic mice. *Ann Neurol*. 2016 Nov;80(5):766-775.

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

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