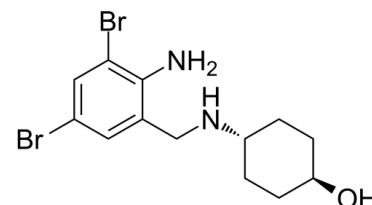


Data Sheet

Product Name:	Ambroxol
Cat. No.:	CS-4558
CAS No.:	18683-91-5
Molecular Formula:	C ₁₃ H ₁₈ Br ₂ N ₂ O
Molecular Weight:	378.10
Target:	Autophagy; Glucosidase
Pathway:	Autophagy; Metabolic Enzyme/Protease
Solubility:	DMSO : ≥ 200 mg/mL (528.96 mM)



BIOLOGICAL ACTIVITY:

Ambroxol (NA-872), an active metabolite of the prodrug Bromhexine, has potent expectorant effects. Ambroxol is a **glucocerebrosidase (GCase)** chaperone and increases glucocerebrosidase activity. Ambroxol induces lung **autophagy** and has the potential for Parkinson disease and neuronopathic Gaucher disease research^{[1][2]}. **In Vivo:** Ambroxol (NA-872; 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].

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.

CAIndexNames:

Cyclohexanol, 4-[[[(2-amino-3,5-dibromophenyl)methyl]amino]-, trans-

SMILES:

O[C@H]1CC[C@H](NCC2=CC(Br)=CC(Br)=C2N)CC1

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

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