Ambroxol hydrochloride, Na\(^+\) channel blocker

**Overview**

**Product name**
Ambroxol hydrochloride, Na\(^+\) channel blocker

**Description**
Antioxidant, anti-inflammatory agent. Na\(^+\) channel blocker and mucolytic agent.

**Biological description**
Antioxidant, anti-inflammatory agent. Na\(^+\) channel blocker and mucolytic agent. Stimulates surfactant secretion and produces expectorant effects by decreasing mucus adhesion to the bronchial lining. Inhibits histamine secretion from mast cells.

**Purity**
> 99%

**CAS Number**
23828-92-4

**Chemical structure**
![Chemical structure of Ambroxol hydrochloride]

**Properties**

**Chemical name**
4-[(2-Amino-3,5-dibromophenyl)methylamino]cyclohexan-1-ol hydrochloride

**Molecular weight**
414.60

**Molecular formula**
C\(_{13}\)H\(_{18}\)Br\(_2\)N\(_2\)O.HCl

**PubChem identifier**
108013

**Storage instructions**
Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.

**Solubility overview**
Soluble in water to 10 mM, in DMSO to 100 mM and in ethanol to 10 mM

**Handling**
Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one month. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.

Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.

**SMILES**
C1CC(CCC1NCC2=C=CC(=C2Br)Br)BrO.Cl
Ambroxol hydrochloride inhibits NaV1.7 channels expressed in HEK293 cells.

A: Time course of current reversible inhibition by 100 µM Ambroxol hydrochloride (ab141778). Currents were elicited by a voltage ramp from a holding potential of -100 mV to 60 mV (30 ms) delivered every 10 seconds.

B: Example traces of current response to voltage ramp stimulation before and during 100 µM Ambroxol hydrochloride application.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES, NOT FOR USE IN HUMANS"

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