

**Product Name:** Ambroxol hydrochloride

**Catalog No.:** 2404

**Batch No.:** 1

CAS Number: 23828-92-4

EC Number: 245-899-2

IUPAC Name: *trans*-4-[[[(2-Amino-3,5-dibromophenyl)methyl]amino]cyclohexanol hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>13</sub>H<sub>18</sub>Br<sub>2</sub>N<sub>2</sub>O.HCl

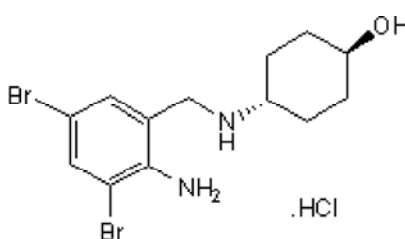
**Batch Molecular Weight:** 414.57

**Physical Appearance:** White solid

**Solubility:** DMSO to 50 mM

**Storage:** Desiccate at +4°C

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**Melting Point:** At 235°C

**HPLC:** Shows 100% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	37.66	4.62	6.76
Found	37.36	4.57	6.6

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel: +1 612 379 2956

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**Description:**

Ambroxol hydrochloride is a sodium channel blocker and mucolytic agent with antioxidant, anti-viral and anti-inflammatory properties. Inhibits tetrodotoxin (TTX)-resistant channels more potently than TTX-sensitive subtypes (IC<sub>50</sub> values for tonic block are 35.2 and 111.5 μM respectively). Inhibits release of histamine, leukotrienes and cytokines from human leukocytes and mast cells. Inhibits viral replication and improves survival rate of mice infected with influenza (H3N2) virus.

**Physical and Chemical Properties:**

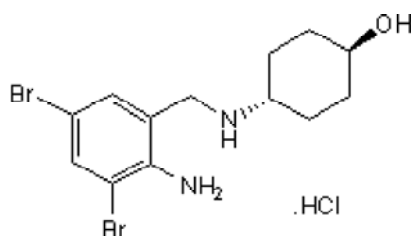
Batch Molecular Formula: C<sub>13</sub>H<sub>18</sub>Br<sub>2</sub>N<sub>2</sub>O.HCl

Batch Molecular Weight: 414.57

Physical Appearance: White solid

**Minimum Purity:** ≥99%

**Batch Molecular Structure:**



**Storage:** Desiccate at +4°C

**Solubility & Usage Info:**

DMSO to 50 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Weiser and Wilson** (2002) Inhibition of tetrodotoxin (TTX)-resistant and TTX-sensitive neuronal Na<sup>+</sup> channels by the secretolytic ambroxol. *Mol.Pharmacol.* **62** 433. PMID: 12181417.

**Yang et al** (2002) Ambroxol suppresses influenza-virus proliferation in the mouse airway by increasing antiviral factor levels. *Eur.Respir.J.* **19** 952. PMID: 12030738.

**Gibbs et al** (1999) Ambroxol inhibits the release of histamine, leukotrienes and cytokines from human leukocytes and mast cells. *Inflamm.Res.* **48** 86. PMID: 10202994.

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