

**Product Name:** Noscapine hydrochloride

**Catalog No.:** 1697

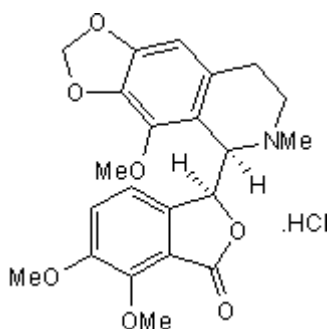
**Batch No.:** 1

CAS Number: 912-60-7

IUPAC Name: (3*S*)-6,7-Dimethoxy-3-[(5*R*)-5,6,7,8-tetrahydro-4-methoxy-6-methyl-1,3-dioxolo[4,5-*g*]isoquinolin-5-yl]-1(3*H*)-isobenzofuranone hydrochloride

## 1. PHYSICAL AND CHEMICAL PROPERTIES

<b>Batch Molecular Formula:</b>	C <sub>22</sub> H <sub>23</sub> NO <sub>7</sub> .HCl.H <sub>2</sub> O
<b>Batch Molecular Weight:</b>	467.9
<b>Physical Appearance:</b>	White solid
<b>Solubility:</b>	1eq. HCl to 50 mM ethanol to 10 mM with gentle warming DMSO to 100 mM
<b>Storage:</b>	Desiccate at RT
<b>Batch Molecular Structure:</b>	



## 2. ANALYTICAL DATA

<b>TLC:</b>	R <sub>f</sub> = 0.73 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.01])
<b>Melting Point:</b>	218°C
<b>HPLC:</b>	Shows 100% purity
<b><sup>1</sup>H NMR:</b>	Consistent with structure
<b>Microanalysis:</b>	
	Carbon Hydrogen Nitrogen
	Theoretical 56.47 5.6 2.99
	Found 56.28 5.44 2.91

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**Description:**

Opioid alkaloid with several actions. Binds to tubulin, arrests cells in mitosis and induces apoptosis. Antagonist at bradykinin receptors ( $pA_2 = 6.68$ ), inhibits carbachol-stimulated phosphoinositol turnover and enhances forskolin-stimulated cAMP increases in CNS tissues. Modulates IKK activation, suppressing the NF- $\kappa$ B signaling pathway. Blocks proliferation of human leukemia and multiple myeloma cells. Exhibits anti-inflammatory activity.

**Physical and Chemical Properties:**

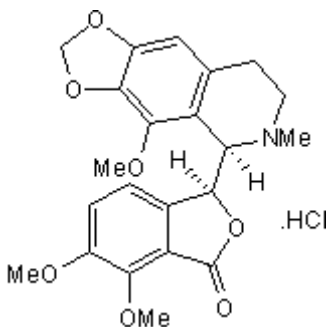
Batch Molecular Formula:  $C_{22}H_{23}NO_7 \cdot HCl \cdot H_2O$

Batch Molecular Weight: 467.9

Physical Appearance: White solid

**Minimum Purity:** >99%

**Batch Molecular Structure:**



**Storage:** Desiccate at RT

**Solubility & Usage Info:**

1eq. HCl to 50 mM  
ethanol to 10 mM with gentle warming  
DMSO to 100 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:**

**Mourey et al** (1992) [ $^3H$ ]Noscapine binding sites in brain: relationship to indoleamines and the phosphoinositide and adenylyl cyclase messenger systems. *Mol.Pharmacol.* **42** 619. PMID: 1331753.

**Mahmoudian and Mojaverian** (2001) Effect of noscapine, the antitussive opioid alkaloid, on bradykinin-induced smooth muscle contraction in the isolated ileum of the guinea-pig. *Acta Physiol.Hung.* **88** 231. PMID: 12162581.

**Landen et al** (2002) Noscapine alters microtubule dynamics in living cells and inhibits the progression of melanoma. *Cancer Res.* **62** 4109. PMID: 12124349.

**Sung et al** (2010) Noscapine, a benzyloisoquinoline alkaloid, sensitizes leukemic cells to chemotherapeutic agents and cytokines by modulating the NF- $\kappa$ B signaling pathway. *Cancer Res.* **70** 3259. PMID: 20354190.

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