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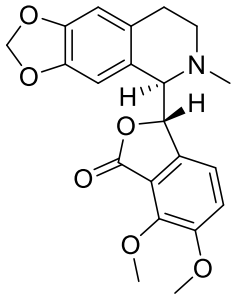
PRODUCT DATA SHEET

Hydrastine

Code No.: **BIA-H1954**

Pack sizes: **1 mg, 5 mg**



Synonyms : (-)-Hydrastine, (-)-β-Hydrastine, (1R,9S)-β-Hydrastine, l-Hydrastine, β-Hydrastine

Specifications

CAS #	:	**118-08-1**
Molecular Formula	:	**$C_{21}H_{21}NO_6$**
Molecular Weight	:	**383.39**
Source	:	***Hydrastis* sp.**
Appearance	:	**White solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in methanol or DMSO**

Application Notes

Hydrastine, an isoquinoline alkaloid discovered in 1851, is one of the active components of the phytomedicine goldenseal (Hydrastis canadensis). Hydrastine is a mixture of four stereoisomers (two racemates). Hydrastine has convulsant, cardiac depressant, and uterine and intestinal stimulant actions. Hydrastine increases the non-adrenergic Inhibitory postsynaptic potential of smooth muscle cells of the guinea pig intestine. Recently, research has focussed on the hydrastine isomers with (-)-β-hydrastine demonstrating antiproliferative activity by inhibiting PAK4 kinase activity in human lung adenocarcinoma cells.

References

1. A review of the pharmacology and therapeutics of Hydrastis and its alkaloids, hydrastine, berberine, and canadine. Shideman F.E. Bulletin of National Formulary Committee 1950, 18, 3.
2. Effect of strychnine, hydrastine and apamin on synaptic transmission in smooth muscle cells. Vladimirova I.A. and Shuba M.F. Neirofiziologiia 1978,10, 295.
3. (-)-β-hydrastine suppresses the proliferation and invasion of human lung adenocarcinoma cells by inhibiting PAK4 kinase activity. Guo B. et al. Oncol Rep. 2016, 35, 2246.

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