

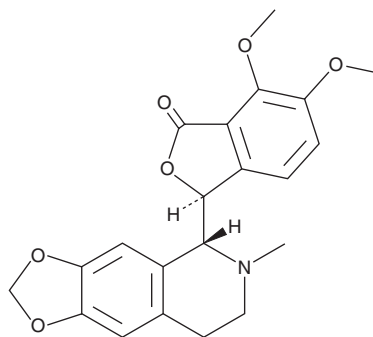
PRODUCT INFORMATION



(1R,9S)-(-)- β -Hydrastine

Item No. 22363

CAS Registry No.: 118-08-1
Formal Name: (3S)-6,7-dimethoxy-3-[(5R)-5,6,7,8-tetrahydro-6-methyl-1,3-dioxolo[4,5-g]isoquinolin-5-yl]-1(3H)-isobenzofuranone
MF: $C_{21}H_{21}NO_6$
FW: 383.4
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 299 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(1R,9S)-(-)- β -Hydrastine is supplied as a crystalline solid. A stock solution may be made by dissolving the (1R,9S)-(-)- β -hydrastine in the solvent of choice, which should be purged with an inert gas. (1R,9S)-(-)- β -Hydrastine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of (1R,9S)-(-)- β -hydrastine in these solvents is approximately 10 mg/ml.

Description

(1R,9S)-(-)- β -Hydrastine is an enantiomer of the alkaloid hydrastine that inhibits dopamine biosynthesis ($IC_{50} = 20.7 \mu\text{M}$ in PC12 cells) by inhibiting tyrosine hydroxylase activity.^{1,2} It inhibits dopamine release with an IC_{50} value of $66.5 \mu\text{M}$ in the presence of high extracellular K^+ levels. It also inhibits L-type and caffeine-activated store-operated Ca^{2+} channels and prevents Ca^{2+} leakage from intracellular stores.^{3,4}

References

1. Kim, S.H., Shin, J.S., Lee, J.J., *et al.* Effects of hydrastine derivatives on dopamine biosynthesis in PC12 cells. *Planta Med.* **67**(7), 609-613 (2001).
2. Yin, S.Y., Kim, Y.M., Lee, J.J., *et al.* Enantio-selective inhibition of (1R,9S)- and (1S,9R)- β -hydrastines on dopamine biosynthesis in PC12 cells. *Neuropharmacology* **47**(7), 1045-1052 (2004).
3. Yin, S.Y., Kim, Y.M., Lee, J.J., *et al.* Effects of (1R,9S)- β -hydrastine on intracellular calcium concentration in PC12 cells. *Biol. Pharm. Bull.* **30**(8), 1547-1550 (2007).
4. Yin, S.Y., Jin, C.M., Yang, Y.J., *et al.* Inhibitory effects of (1R,9S)- β -Hydrastine on calcium transport in PC12 cells. *Arch. Pharm. Res.* **30**(1), 109-113 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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