Dihydroergotamine methanesulfonate salt

Product Number  D 2763
Store at Room Temperature

Product Description

Molecular Formula:  C_{33}H_{37}N_{5}O_{5} \cdot CH_{4}O_{3}S
Molecular Weight:  679.8
CAS Number:  6190-39-2
Melting point:  230-235 °C
Extinction coefficients:  E^{\text{nm}} = 6.03 (291 nm), 7.08 (282 nm)
Synonym:  9,10-dihydro-12'-hydroxy-2'-methyl-5'-(phenylmethyl)ergotaman-3',6',18-trione

The semi-synthetic, hydrogenated ergot alkaloid dihydroergotamine is an \( \alpha \)-adrenergic blocker and vasoconstrictor, with lower oxytoxic and vasoconstrictor properties compared to ergotamine. It is also a competitive serotonin receptor antagonist and a partial agonist at \( \alpha \)-adrenergic and D\(_2\) dopamine receptors.\(^3,4\) A study of the activity of dihydroergotamine and other 5-HT\(_1\) receptor agonists on human 5-HT\(_{1B}\) and 5-HT\(_{1D}\) receptors expressed in various mammalian cell lines has been reported.\(^5\)

The modulation of cytochrome P450 metabolism in rat liver microsomes by dihydroergotamine has been probed.\(^6\) A \textit{in vivo} study of dihydroergotamine uptake in the rat brain has been published.\(^7\)

Several methods have described the analysis of dihydroergotamine in serum and plasma, by a combination of HPLC and fluorescence detection.\(^8,9\)

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in a chloroform:methanol (1:1) mixture (20 mg/ml), yielding a clear, yellow to dark yellow solution. It is also soluble in 45% (w/v) aqueous 2-hydroxypropyl-\( \beta \)-cyclodextrin (5.45 mg/ml), but is insoluble in water.

References
1. The Merck Index, 11th ed., Entry# 3217.
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