

Product Data Sheet

Product Name: Vinpocetine

Cat. No.: GC16658

Chemical Properties

Cas. No. 42971-09-5

Chemical Name (41S,13aS)-ethyl 13a-ethyl-2,3,4,5,6,13a-hexahydro-1H-indolo[3,2,1-de]pyrido[3,2,1-ij][1,5]naphthyridine-12-carboxylate

SMILES O=C(C(N1C2=C(C3=C([H])C([H])=C([H])C([H])=C13)C([H])([H])C4([H])([H])=C([H])[C@@]5(C([H])([H])C([H])([H])([H])[C@]2([H])N4C([H])([H])C([H])([H])C5([H])([H])OC([H])([H])C([H])([H])[H])

Formula C₂₂H₂₆N₂O₂ M.Wt 350.45

Solubility ≥ 5.83mg/mL in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

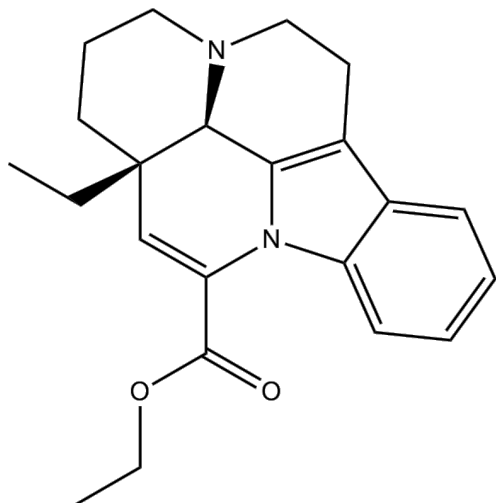
Caution: Product has not been fully validated for medical applications. For research use only.

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Structure



Background

Vinpocetine (Ethyl apovincamate) is a derivative of the alkaloid Vincamine that blocks voltage-gated Na⁺ channels. The IC₅₀ value of Vinpocetine on direct IKK inhibition in the cell-free system is 17.17 μ M. Vinpocetine is a phosphodiesterase (PDE) inhibitor and inhibits NF- κ B-dependent inflammatory responses by directly targeting I κ B kinase complex (IKK), and has been widely used for the treatment of cerebrovascular disorders[1][2][3].

Vinpocetine (5-50 μ M; 7 hours; VSMCs, HUVECs, A549 cells and RAW264.7 cells) potently inhibits TNF- α -induced NF- κ B-dependent transcriptional activity in a dose-dependent manner with an approximate IC₅₀ value of 25 μ M. Vinpocetine do not have a significant effect on cell viability[1]. Vinpocetine (50 μ M; 7 hours; VSMCs, HUVECs, A549 cells and RAW264.7 cells) potently inhibits TNF- α -induced up-regulation of TNF- α , IL-1 β , IL-8, MCP-1, VCAM-1, ICAM-1 and MIP-2 transcripts in several cell types[1].

Vinpocetine (2.5-10 mg/kg; intraperitoneal injection; C57BL/6 mice) potently inhibits TNF- α - or LPS-induced up-regulation of proinflammatory mediators, including TNF- α , IL-1 β , and MIP-2, and decreases interstitial infiltration of polymorphonuclear leukocytes in a mouse model of TNF- α - or

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LPS-induced lung inflammation[1].

References:

- [1]. Kye-Im Jeon et al. Vinpocetine inhibits NF- κ B-dependent inflammation via an IKK-dependent but PDE-independent mechanism PNAS May 25, 2010 vol. 107 no. 21 9795-9800
- [2]. Patyar S, et al. Role of vinpocetine in cerebrovascular diseases. Pharmacol Rep. 2011;63(3):618-28.
- [3]. Alexandre E. Medina Vinpocetine as a potent antiinflammatory agent PNAS June 1, 2010, Vol. 107, No. 22 9921-9922.

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