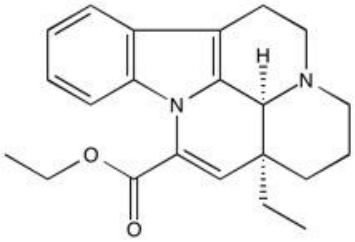
Catalog # 10-1126

Vinpocetine

CAS# 42971-09-5

(3α,16α)-Eburnamenine-14-carboxylic acid ethyl ester

Lot # X101159



Phosphodiesterase PDE1 inhibitor (IC_{50}=21 μM).[1] Also blocks voltage-gated Na^+ channels, IC_{50}=44.2 μM (potency similar to phenytoin), a mechanism which may contribute to its neuroprotective and anticonvulsant activity.[2] It reduces inflammatory IL-1β and TNF-α expression in rat hippocampus.[3] Displays beneficial effects in a rat model of cerebral ischemia-reperfusion injury.[4] Exerts neuroprotective effects by suppressing microglial inflammation.[5]

1) Hagiwara *et al*. (1984), *Effects of vinpocetine on cyclic nucleotide metabolism in vascular smooth muscle*; Biochem. Pharmacol., **33** 453
2) Molnar and Erdo (1995), *Vinpocetine is as potent as phenytoin to block voltage-gated Na+ channels in rat cortical neurons*; Eur. J. Pharmacol., **273** 303
3) Gomez *et al*. (2014), *The anti-seizure drugs vinpocetine and carbamazepine, but not valproic acid, reduced inflammatory IL1β and TNF-α expression in rat hippocampus*; J. Neurochem., **130** 770
4) Wang *et al*. (2014), *Anti-inflammatory effects of vinpocetine on the functional expression of nuclear factor-kappa B and tumor necrosis factor-alpha in a rat model of cerebral ischemia-reperfusion injury*; Neuro. Sci. Lett., **566** 247
5) Zhao *et al*. (2011), *TSPO-specific ligand vinpocetine exerts a neuroprotective effect by suppressing microglial inflammation*; Glia Biol., **7** 187

PHYSICAL DATA

Molecular Weight:	350.45
Molecular Formula:	$C_{22}H_{26}N_2O_2$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 5 mg/ml), Ethanol (up to 15 mg/ml), or DMF (up to 3 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied, desiccated at room temperature for up to 1 year from the date of purchase. Solutions in DMSO, ethanol or DMF may be stored at -20°C for up to 3 months.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

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