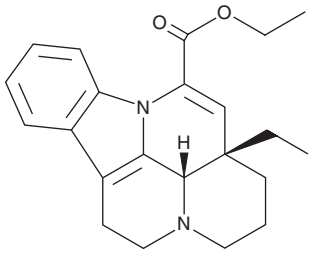
PRODUCT INFORMATION

Vinpocetine

Item No. 19578

CAS Registry No.:	42971-09-5
Formal Name:	(3α,16α)-eburnamenine-14-carboxylic acid, ethyl ester
Synonyms:	Apovincaminic Acid ethyl ester, AY 27255, RGH-4405
MF:	$C_{22}H_{26}N_2O_2$
FW:	350.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 274, 314 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

Vinpocetine is supplied as a crystalline solid. A stock solution may be made by dissolving the vinpocetine in the solvent of choice, which should be purged with an inert gas. Vinpocetine is soluble in the organic solvent dimethyl formamide at a concentration of approximately 0.25 mg/ml.

Description

Vinpocetine is a semisynthetic alkaloid commonly used as an inhibitor of phosphodiesterase 1 (PDE1), blocking the hydrolysis of both cAMP and cGMP (K_i = 14 µM).[1,2] In addition to its use as a selective PDE1 inhibitor in basic research, vinpocetine has diverse cerebral and neurological effects *in vivo*.[2] Vinpocetine also directly inhibits the kinase activity of IKKβ (IC_{50} = 17 µM in a cell-free system) and blocks TNF-α- and LPS-mediated activation of NF-κB in cells and *in vivo*.[3]

References

1. Manallack, D.T., Hughes, R.A., and Thompson, P.E. The next generation of phosphodiesterase inhibitors: Structural clues to ligand and substrate selectivity of phosphodiesterases. *J. Med. Chem.* **48(10)**, 3449-3462 (2005).
2. Medina, A.E. Therapeutic utility of phosphodiesterase type I inhibitors in neurological conditions. *Front. Neurosci.* **5(21)**, (2011).
3. Jeon, K.-I., Xu, X., Aizawa, T., *et al.* Vinpocetine inhibits NF-κB-dependent inflammation *via* an IKK-dependent but PDE-independent mechanism. *Proc. Natl. Acad. Sci. USA* **107(21)**, 9795-9800 (2016).

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