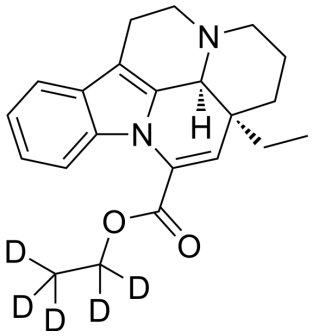
Vinpocetine-d_5

Cat. No.:	HY-13295S
CAS No.:	2734920-39-7
Molecular Formula:	$C_{22}H_{21}D_5N_2O_2$
Molecular Weight:	355.48
Target:	Sodium Channel; IKK; Phosphodiesterase (PDE); Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; NF-κB; Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Vinpocetine-d_5 is the deuterium labeled Vinpocetine. Vinpocetine (Ethyl apovincaminate) 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 μM. Vinpocetine is a phosphodiesterase (PDE) inhibitor and inhibits NF-κB-dependent inflammatory responses by directly targeting IκB kinase complex (IKK), and has been widely used for the treatment of cerebrovascular disorders[1][2][3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Kye-Im Jeon et al. Vinpocetine inhibits NF-κB-dependent inflammation via an IKK-dependent but PDE-independent mechanism PNAS May 25, 2010 vol. 107 no. 21 9795-9800

[3]. Patyar S, et al. Role of vinpocetine in cerebrovascular diseases. Pharmacol Rep. 2011;63(3):618-28.

[4]. Alexandre E. Medina Vinpocetine as a potent antiinflammatory agent PNAS June 1, 2010, Vol. 107, No. 22 9921-9922.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA