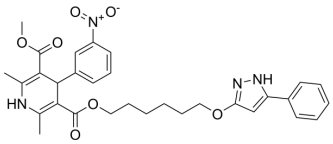
CV-159

Cat. No.:	HY-19025
CAS No.:	86384-98-7
Molecular Formula:	$C_{31}H_{34}N_4O_7$
Molecular Weight:	574.62
Target:	Calmodulin
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	CV-159 is a unique dihydropyridine Ca^{2+} antagonist with an anti-calmodulin (CaM) action, and has antiinflammatory activities.
In Vitro	CV-159 (0.1-10 μM) significantly inhibits TNF-α (10 ng/ml, 24 h)-induced VCAM-1 in SMCs in a concentrationdependent manner. CV-159 (10 μM, 30 min) significantly inhibits the TNF-induced ROS production[1]. CV-159 (10 μM) inhibits TNF (24 h)-induced expression of e-selectin but not vascular cell adhesion molecule-1 and intercellular adhesion molecule-1. CV-159 inhibits TNF (20 min)-induced phosphorylation of JNK, p38, and NF-κB p65 (Ser536)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	CV-159 (5 and 10 mg/kg, p.o.) gives significant protection against delayed neuronal death in the hippocampal CA1 region of the rats after 15-min transient forebrain ischemia. CV-159 also diminishes the size of the brain infarct after permanent middle cerebral artery (MCA) occlusion. CV-159 significantly reduces the increase in the water content of the infarcted cortex induced by MCA occlusion[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Usui T, et al. Mechanisms underlying the anti-inflammatory effects of the Ca2+/calmodulin antagonist CV-159 in cultured vascular smooth muscle cells. J Pharmacol Sci. 2010;113(3):214-23. Epub 2010 Jun 16.

[2]. Usui T, et al. CV-159, a unique dihydropyridine derivative, prevents TNF-induced inflammatory responses in human umbilical vein endothelial cells. J Pharmacol Sci. 2010;113(2):182-91. Epub 2010 May 19.

[3]. Miyazaki H, et al. Neuroprotective effects of a dihydropyridine derivative, 1,4-dihydro-2,6-dimethyl-4-(3-nitrophenyl)-3,5-pyridinedicarbox ylic acid methyl 6-(5-phenyl-3-pyrazolyloxy)hexyl ester (CV-159), on rat ischemic brain injury. Life Sci. 1999;64(10):869-78.

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