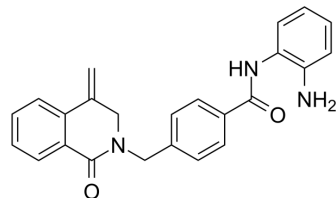


MI-192

Cat. No.:	HY-110264
CAS No.:	1415340-63-4
Molecular Formula:	C ₂₄ H ₂₁ N ₃ O ₂
Molecular Weight:	383.44
Target:	HDAC; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	MI-192 is a selective HDAC2 and HDAC3 inhibitor with IC ₅₀ s of 30 nM and 16 nM, respectively. MI-192 is more selective for HDAC2/3 than other HDAC isomers. MI-192 induces myeloid leukaemic cells apoptosis. Anticancer and neuroprotective activities ^{[1][2]} .								
In Vitro	<p>MI-192 (0.15-1 μM; 72 h) induces differentiation and is cytotoxic through promotion of apoptosis in acute myeloid leukaemic cell lines U937, HL60 and Kasumi-1^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Apoptosis Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>HL60 and Kasumi-1 cells</td> </tr> <tr> <td>Concentration:</td> <td>150 nM, 300 nM, 500 nM, 1 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>72 h</td> </tr> <tr> <td>Result:</td> <td>Induced a substantial degree of apoptosis in both HL60 and Kasumi-1 cells.</td> </tr> </table>	Cell Line:	HL60 and Kasumi-1 cells	Concentration:	150 nM, 300 nM, 500 nM, 1 μM	Incubation Time:	72 h	Result:	Induced a substantial degree of apoptosis in both HL60 and Kasumi-1 cells.
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In Vivo	<p>MI-192 (40 mg/kg; i.p; once a day; for 3 days) shows the neuroprotective activity in the mouse brain subjected to photothrombotic stroke^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Adult male outbred mice CD-1 (20-25 g) with photothrombotic stroke (PTS)^[2]</td> </tr> <tr> <td>Dosage:</td> <td>40 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>i.p; once a day; for 3 days</td> </tr> <tr> <td>Result:</td> <td>Reduced the volume of the PTS-induced infarction core in the mouse brain, partly restored the functional symmetry in the forelimb use, decreased the level of PTS-induced apoptosis and acetylation of α-tubulin characteristic for stable microtubules, and increased the expression of GAP-43 in the cerebral cortex of the damaged hemisphere.</td> </tr> </table>	Animal Model:	Adult male outbred mice CD-1 (20-25 g) with photothrombotic stroke (PTS) ^[2]	Dosage:	40 mg/kg	Administration:	i.p; once a day; for 3 days	Result:	Reduced the volume of the PTS-induced infarction core in the mouse brain, partly restored the functional symmetry in the forelimb use, decreased the level of PTS-induced apoptosis and acetylation of α-tubulin characteristic for stable microtubules, and increased the expression of GAP-43 in the cerebral cortex of the damaged hemisphere.
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REFERENCES

[1]. Marjorie Boissinot, et al. Induction of differentiation and apoptosis in leukaemic cell lines by the novel benzamide family histone deacetylase 2 and 3 inhibitor MI-192. *Leuk Res.* 2012 Oct;36(10):1304-10.

[2]. S V Demyanenko, et al. The Neuroprotective Effect of the HDAC2/3 Inhibitor MI192 on the Penumbra After Photothrombotic Stroke in the Mouse Brain. *Mol Neurobiol.* 2020 Jan;57(1):239-248.

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

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