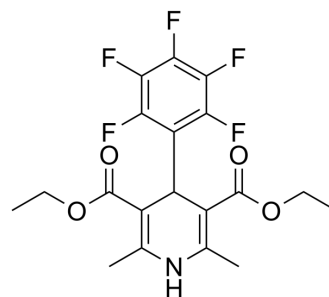


Nemadipine-A

Cat. No.:	HY-126583
CAS No.:	54280-71-6
Molecular Formula:	C ₁₉ H ₁₈ F ₅ NO ₄
Molecular Weight:	419.34
Target:	Calcium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Nemadipine-A is a specific inhibitor of the EGL-19 L-type Ca ²⁺ channel ^[1] . Nemadipine-A, a cell-permeable L-type calcium channel inhibitor, sensitizes TRAIL-resistant cancer cells to this ligand ^[2] .																
In Vitro	<p>Nemadipine-A is a specific and highly effective inhibitor of EGL-19. Nemadipine-A (μM) is sufficient to abolish the enhanced level of paralysis observed in egl-19(ad695); crls4 mutants^[1].</p> <p>Nemadipine-A strongly potentiates TRAIL-induced apoptosis in TRAIL-resistant lung cancer cells via the down-regulation of the anti-apoptotic protein survivin^[2]. Nemadipine-A sensitizes H1299 lung cancer cells towards TRAIL-induced cytotoxicity^[2]. Combination of Nemadipine-A (20 μM) with TRAIL (20 ng/mL) induces caspase-mediated apoptotic cell death^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>H1299 lung adenocarcinoma cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 5, 10, 20, and 30 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>8 hours</td> </tr> <tr> <td>Result:</td> <td>H1299 cells were resistant to the apoptotic effects of TRAIL, but the co-administration of Nemadipine-A and TRAIL in these cells resulted in notably increased cytotoxicity in a dose-dependent manner.</td> </tr> </table> <p>Western Blot Analysis^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>H1299 cells</td> </tr> <tr> <td>Concentration:</td> <td>20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>8 hours</td> </tr> <tr> <td>Result:</td> <td>Co-treated with TRAIL and Nemadipine-A (T/N; 20 ng/mL and 20 μM respectively) induced cell death in H1299 cells.</td> </tr> </table>	Cell Line:	H1299 lung adenocarcinoma cells	Concentration:	0, 5, 10, 20, and 30 μM	Incubation Time:	8 hours	Result:	H1299 cells were resistant to the apoptotic effects of TRAIL, but the co-administration of Nemadipine-A and TRAIL in these cells resulted in notably increased cytotoxicity in a dose-dependent manner.	Cell Line:	H1299 cells	Concentration:	20 μM	Incubation Time:	8 hours	Result:	Co-treated with TRAIL and Nemadipine-A (T/N; 20 ng/mL and 20 μM respectively) induced cell death in H1299 cells.
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REFERENCES

[1]. Peter I Joyce, et al. The atypical calpains: evolutionary analyses and roles in *Caenorhabditis elegans* cellular. PLoS Genet. 2012;8(3):e1002602.degeneration

[2]. Seong Ho Park, et al. Down-Regulation of Survivin by Nemadipine-A Sensitizes Cancer Cells to TRAIL-Induced Apoptosis. Biomol Ther (Seoul). 2013 Jan;21(1):29-34.

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

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