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Zuschläge

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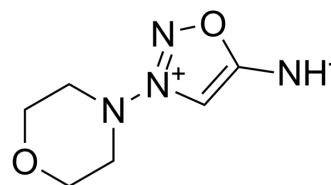
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3-Morpholinosydnonimine

Cat. No.:	HY-126849
CAS No.:	33876-97-0
Molecular Formula:	C ₆ H ₁₀ N ₄ O ₂
Molecular Weight:	170.17
Target:	MDM-2/p53
Pathway:	Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	3-Morpholinosydnonimine (SIN-1; Linsidomine) is a spontaneous ROS/RNS generator and a peroxyxynitrite donor. 3-Morpholinosydnonimine inhibits hypertrophic chondrocytes activity and induces necrosis. 3-Morpholinosydnonimine induces p53-dependent apoptosis, induces p53 accumulation and activates MAPK phosphorylation ^{[1][2]} .																
In Vitro	<p>3-Morpholinosydnonimine (1, 3, and 5 mM; 24 h) inhibits hypertrophic chondrocytes viability^[1].</p> <p>3-Morpholinosydnonimine (3 mM, and 5 mM; 24 h) induces necrosis death in hypertrophic chondrocytes, as well as inducing apoptosis death in both ATDC5 cells and C28/I2 cells^[1].</p> <p>3-Morpholinosydnonimine (50 μM, 200 μM, and 400 μM; 6 h) induces a rapid increase in expression of p53 and induce p53-dependent apoptosis in neuron-rich mouse telencephalic cells^[2].</p> <p>3-Morpholinosydnonimine (200 μM; 6 h) induces p53 accumulation through p21(ras) activation^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Hypertrophic chondrocytes</td> </tr> <tr> <td>Concentration:</td> <td>0 mM, 1 mM, 3 mM, and 5 mM</td> </tr> <tr> <td>Incubation Time:</td> <td>0 h, 4 h, 8 h, 12 h, and 24 h</td> </tr> <tr> <td>Result:</td> <td>Decreased the cellular viability by 30%, 50%, and 80% respectively at 1, 3, and 5 mM.</td> </tr> </table> <p>Western Blot Analysis^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Mouse primary neural cells</td> </tr> <tr> <td>Concentration:</td> <td>200 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>6 h</td> </tr> <tr> <td>Result:</td> <td>Induced p53 accumulation.</td> </tr> </table>	Cell Line:	Hypertrophic chondrocytes	Concentration:	0 mM, 1 mM, 3 mM, and 5 mM	Incubation Time:	0 h, 4 h, 8 h, 12 h, and 24 h	Result:	Decreased the cellular viability by 30%, 50%, and 80% respectively at 1, 3, and 5 mM.	Cell Line:	Mouse primary neural cells	Concentration:	200 μM	Incubation Time:	6 h	Result:	Induced p53 accumulation.
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REFERENCES

[1]. He Y, et al. 3-morpholinopyridone (SIN-1)-induced oxidative stress leads to necrosis in hypertrophic chondrocytes in vitro. *Biomed Pharmacother.* 2018 Oct;106:1696-1704.

[2]. Kaji T, et al. 3-Morpholinopyridone hydrochloride induces p53-dependent apoptosis in murine primary neural cells: a critical role for p21(ras)-MAPK-p19(ARF) pathway. *Nitric Oxide.* 2002 Mar;6(2):125-34.

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

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