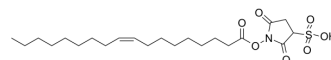


Sulfosuccinimidyl oleate

Cat. No.:	HY-112847
CAS No.:	135661-44-8
Molecular Formula:	C ₂₂ H ₃₇ NO ₇ S
Molecular Weight:	459.6
Target:	Mitophagy
Pathway:	Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Sulfosuccinimidyl oleate (Sulfo-N-succinimidyl oleate) is a long chain fatty acid that inhibits fatty acid transport into cells. Sulfosuccinimidyl oleate is a potent and irreversible inhibitor of mitochondrial respiratory chain. Sulfosuccinimidyl oleate binds the CD36 receptor on the surface of microglia. Anti-inflammatory effect ^{[1][2]} .																
In Vitro	<p>Sulfosuccinimidyl oleate (20 μM and 50 μM, 24 hours) alone does not alter the cellular viability. Exposure to 100 ng/ml LPS+5 ng/mL IFNγ modestly, yet significantly reduces the viability of the BV2 cells. Co-treatment with Sulfosuccinimidyl oleate prevents the LPS+IFNγ-induced reduction in the cell viability^[1].</p> <p>Sulfosuccinimidyl oleate (50 μM, 24 hours) co-treatment significantly reduces the LPS+IFNγ-induced expression of NOS2 and COX-2 in BV2 cells. Western blot analysis reveals a significant LPS/IFNγ-induced upregulation in the phosphorylated form of the p38, which is prevented by co-treatment with Sulfosuccinimidyl oleate (50 μM, 24 hours)^[1].</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>BV2 cells</td> </tr> <tr> <td>Concentration:</td> <td>20 μM and 50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Did not alter the viability of BV2 cells alone. Exposure of BV2 cells to 100 ng/mL LPS and 5 ng/mL IFNγ significantly reduced the viability of BV2 cells while simultaneous treatment with Sulfosuccinimidyl oleate prevented it.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>BV2 cells</td> </tr> <tr> <td>Concentration:</td> <td>50 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 hours</td> </tr> <tr> <td>Result:</td> <td>Drastically increased the levels of NOS2, COX-2, and P-p38/T-p38.</td> </tr> </table>	Cell Line:	BV2 cells	Concentration:	20 μM and 50 μM	Incubation Time:	24 hours	Result:	Did not alter the viability of BV2 cells alone. Exposure of BV2 cells to 100 ng/mL LPS and 5 ng/mL IFNγ significantly reduced the viability of BV2 cells while simultaneous treatment with Sulfosuccinimidyl oleate prevented it.	Cell Line:	BV2 cells	Concentration:	50 μM	Incubation Time:	24 hours	Result:	Drastically increased the levels of NOS2, COX-2, and P-p38/T-p38.
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In Vivo	Sulfosuccinimidyl oleate (50 mg/kg; administered once by single oral gavage) significantly reduces the cortical ischemic infarct size compared to vehicle-treated controls in male BALB/cABom mice with pMCAo model. In addition,																

Sulfosuccinimidyl oleate at 50 mg/kg is suitable to see a beneficial effect after stroke^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	4-month-old male BALB/cABom mice with pMCAo model ^[1]
Dosage:	50 mg/kg
Administration:	Administered once by single oral gavage
Result:	Reduced brain damage following ischemia. Attenuated infarct size.

CUSTOMER VALIDATION

- J Exp Med. 2023 Mar 6;220(3):e20221316.
- Cancer Lett. 2023 Nov 25, 216511.
- Int J Biol Macromol. 2023 Oct 12:127324.
- Food Res Int. 2023 Nov, 173, 113328.
- J Transl Med. 2023 Feb 6;21(1):89.

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REFERENCES

- [1]. Dhungana H, et al. Sulfosuccinimidyl oleate sodium is neuroprotective and alleviates stroke-induced neuroinflammation. J Neuroinflammation. 2017 Dec 4;14(1):237.
- [2]. Drahota Z, et al. Succinimidyl oleate, established inhibitor of CD36/FAT translocase inhibits complex III of mitochondrial respiratory chain. Biochem Biophys Res Commun. 2010 Jan 15;391(3):1348-51.

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

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