



# SZABO SCANDIC

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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

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- Trockeneiszuschlag
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- Expressversand

### SZABO-SCANDIC HandelsgmbH

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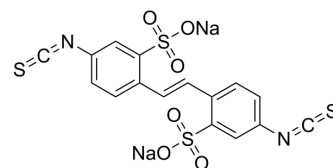
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## DIDS sodium salt

<b>Cat. No.:</b>	HY-D0086
<b>CAS No.:</b>	67483-13-0
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>8</sub> N <sub>2</sub> Na <sub>2</sub> O <sub>6</sub> S <sub>4</sub>
<b>Molecular Weight:</b>	498.48
<b>Target:</b>	VDAC
<b>Pathway:</b>	Membrane Transporter/Ion Channel
<b>Storage:</b>	-20°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



## SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 125 mg/mL (250.76 mM; ultrasonic and warming and heat to 60°C)																					
	H <sub>2</sub> O : 33.33 mg/mL (66.86 mM; Need ultrasonic)																					
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Preparing Stock Solutions</td> <td>1 mM</td> <td>2.0061 mL</td> <td>10.0305 mL</td> <td>20.0610 mL</td> </tr> <tr> <td>5 mM</td> <td>0.4012 mL</td> <td>2.0061 mL</td> <td>4.0122 mL</td> </tr> <tr> <td>10 mM</td> <td>0.2006 mL</td> <td>1.0030 mL</td> <td>2.0061 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	2.0061 mL	10.0305 mL	20.0610 mL	5 mM	0.4012 mL	2.0061 mL	4.0122 mL	10 mM	0.2006 mL	1.0030 mL	2.0061 mL
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Please refer to the solubility information to select the appropriate solvent.																						
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.08 mg/mL (4.17 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.17 mM); Clear solution</li> </ol>																					

## BIOLOGICAL ACTIVITY

<b>Description</b>	DIDS sodium salt (MDL101114ZA) is a dual ABCA1 and VDAC1 inhibitor.
<b>IC<sub>50</sub> &amp; Target</b>	ABCA1 <sup>[1]</sup> , VDAC1 <sup>[2]</sup> .
<b>In Vitro</b>	<p>Concentration less than 400 μM DIDS has no evident cytotoxic effect on cell viability. Pre-treatment with DIDS at the concentration of 100 and 200 μM result in a prevented effect on ALA-SDT-induced cell death, while dose at 50 μM has no inhibition effect. At the concentration of 400 μM DIDS itself slightly decreases the cell viability, although there is no significant statistic difference as compared with the untreated control. Pre-treatment with DIDS (100 μM) clearly inhibit caspase-3 and caspase-9 activation<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

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## PROTOCOL

### Cell Assay

Cells ( $5 \times 10^5$  cells/mL) are seeded in the 35-mm Petri dishes and cultured for 72 h at 37°C. Cells are pre-incubated with ALA, and then DIDS of diverse concentrations (0-200  $\mu$ M) is added before exposed to ultrasound. Cell apoptosis is detected. Briefly, seeded cells ( $5 \times 10^5$  cells/mL) are pre-treated with test compounds at the indicated concentrations for 1 h (DIDS and NAC), 1.5 h (BAPTA) or with siRNA and exposed to ultrasound. Six hours after ALA-SDT treatment, cells are collected<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Adv Sci (Weinh). 2021 Nov;8(21):e2101936.
- Autophagy. 2021 Nov;17(11):3592-3606.
- Cell Death Discov. 2023 Jul 8;9(1):234.
- Life Sci. 2020 Oct 15;259:118390.
- Cancer Sci. 2020 Nov;111(11):4288-4302.

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## REFERENCES

[1]. Tsou CY, et al. Activation of soluble guanylyl cyclase prevents foam cell formation and atherosclerosis. Acta Physiol (Oxf). 2014 Apr;210(4):799-810.

[2]. Chen H, et al. Inhibition of VDAC1 prevents  $\text{Ca}^{2+}$ -mediated oxidative stress and apoptosis induced by 5-aminolevulinic acid mediated sonodynamic therapy in THP-1 macrophages. Apoptosis. 2014 Dec;19(12):1712-26.

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

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