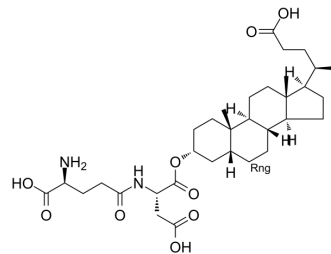


## GSTO-IN-2

<b>Cat. No.:</b>	HY-112534
<b>CAS No.:</b>	1202710-57-3
<b>Molecular Formula:</b>	C <sub>33</sub> H <sub>52</sub> N <sub>2</sub> O <sub>9</sub>
<b>Molecular Weight:</b>	620.77
<b>Target:</b>	Gutathione S-transferase
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	Powder    -20°C    3 years 4°C        2 years In solvent   -80°C    2 years -20°C    1 year



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (161.09 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>1.6109 mL</td> <td>8.0545 mL</td> <td>16.1090 mL</td> </tr> <tr> <td>5 mM</td> <td>0.3222 mL</td> <td>1.6109 mL</td> <td>3.2218 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1611 mL</td> <td>0.8055 mL</td> <td>1.6109 mL</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	1.6109 mL	8.0545 mL	16.1090 mL	5 mM	0.3222 mL	1.6109 mL	3.2218 mL	10 mM	0.1611 mL	0.8055 mL	1.6109 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; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.03 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.5 mg/mL (4.03 mM); Clear solution</li> </ol>																					

### BIOLOGICAL ACTIVITY

<b>Description</b>	GSTO-IN-2 is a glutathione S-transferase inhibitor with IC <sub>50</sub> s of 3.6, 16.3, and 1.4 μM for GSTA2, GSTM1, and GSTP1-1.
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 3.6 μM (GSTA2), 16.3 μM (GSTM1), 1.4 μM (GSTP1-1) <sup>[1]</sup>
<b>In Vitro</b>	<p>GSTO-IN-2 is compound 3 in the reference. GSTO-IN-2 shows synergetic effect with chemotherapy drugs against two breast cancer cell lines through the inactivation of GST isozymes. The maximal enhancement of cisplatin-induced inhibition of cell viability is observed at 50 μM GSTO-IN-2, up to 640% against MCF-7 and up to 270% against MDA-MB-231. Viability inhibition of thiotepa is enhanced by GSTO-IN-2 (25 and 50 μM), up to 170-320% against MCF-7 and up to 180-270% against MDA-MB-231.<sup>[1]</sup></p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

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## CUSTOMER VALIDATION

- Proc Natl Acad Sci U S A. 2022 Feb 1;119(5):e2119767119.
- Life Sci Alliance. 2021 Jun 18;4(8):e202000906.

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## REFERENCES

[1]. Chang KH, et al. Lithocholic acid analogues, new and potent alpha-2,3-sialyltransferase inhibitors. Chem Commun (Camb). 2006 Feb 14;(6):629-31.

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

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