

I-152

## Chemical Properties

CAS No. : 311343-11-0

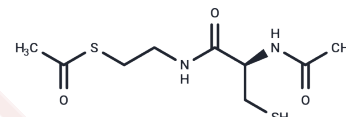
Formula: C<sub>9</sub>H<sub>16</sub>N<sub>2</sub>O<sub>3</sub>S<sub>2</sub>

Molecular Weight: 264.37

Store at low temperature

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	I-152 is a coupling of N-acetylcysteine and β-mercaptoethylamine. I-152 has antiproliferative, antiviral, and immunomodulatory activities. I-152 is used in the study of viral infections because it activates NRF2 and ATF4 signaling.
Targets(IC50)	Nrf2
In vitro	When I-152 is treated with RAW 264.7 cells at a concentration of 1 mM, it decreases the level of NRF2 mRNA after 1 h or 2 h; treatment for 0-60 min not only decreases the levels of NRF2 and p53, but also increases the expression of ATF4. In addition, at concentrations of 0.062, 0.125, 0.25, or 1 mM, I-152 was able to increase the levels of Gclc mRNA and Chac1 mRNA after 6 h or 24 h, and increase Chop mRNA expression after 6 h. The expression of Chac1 mRNA was also increased at concentrations of 0.062, 0.125, 0.25, or 1 mM. I-152 also increased GSH levels in RAW 264.7 cells when treated at concentrations of 0.062, 0.125, 0.25, or 1 mM for 2 hours. At a concentration of 1 mM, I-152 treatment for 1 h, 2 h, 6 h and 24 h activated the expression of ATF4 mRNA in RAW 264.7 cells; whereas treatment for 24 h and 48 h produced cytotoxicity and inhibited the growth of RAW 264.7 cells. [1]

## Solubility Information

Solubility	DMSO: 80 mg/mL (302.61 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (12.48 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	3.7826 mL	18.9129 mL	37.8258 mL
5 mM	0.7565 mL	3.7826 mL	7.5652 mL
10 mM	0.3783 mL	1.8913 mL	3.7826 mL
50 mM	0.0757 mL	0.3783 mL	0.7565 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Crinelli R, et al. Activation of NRF2 and ATF4 Signaling by the Pro-Glutathione Molecule I-152, a Co-Drug of N-Acetyl-Cysteine and Cysteamine. *Antioxidants (Basel)*. 2021 Jan 26;10(2):175.

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