

## Gut restricted-7

## Chemical Properties

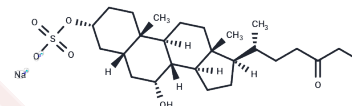
CAS No. : 2553218-46-3

Formula: C<sub>25</sub>H<sub>40</sub>FNaO<sub>6</sub>S

Molecular Weight: 510.64

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	Gut restricted-7 (GR-7) is a covalent and orally active pan-bile salt hydrolase (BSH) inhibitor that reduces gut bacterial BSHs and decreases deconjugated bile acid levels in the feces of mice.
Targets(IC50)	Antibacterial, Potassium Channel
In vitro	Gut restricted-7 (60 μM) does not affect the epithelial barrier integrity of Caco-2 cells, suggesting that this compound is relatively nontoxic. Gut restricted-7 also does not affect microbial biomass.
In vivo	The C57BL/6 mice fed with either powdered chow containing 0.09% Gut restricted-7 (w/w) for 1 d day or powdered chow alone. Gut restricted-7 significantly inhibits the BSH activity in the feces of inhibitor-treated mice 8 h post-diet change. 20 picomol/mg wet mass (~20 μM) of Gut restricted-7 in cecal contents is detected.

## Solubility Information

Solubility	DMSO: 250 mg/mL (489.58 mM), Sonication is recommended. H <sub>2</sub> O: 100 mg/mL (195.83 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: 5 mg/mL (9.79 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	1.9583 mL	9.7916 mL	19.5833 mL
5 mM	0.3917 mL	1.9583 mL	3.9167 mL
10 mM	0.1958 mL	0.9792 mL	1.9583 mL
50 mM	0.0392 mL	0.1958 mL	0.3917 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

Adhikari AA, et al. Development of a covalent inhibitor of gut bacterial bile salt hydrolases. Nat Chem Biol. 2020 Mar;16(3):318-326.

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