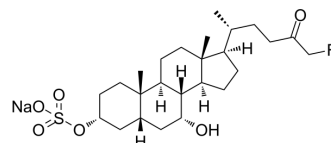


Gut restricted-7

Cat. No.:	HY-135747
CAS No.:	2553218-46-3
Molecular Formula:	C ₂₅ H ₄₀ FN ₆ O ₆ S
Molecular Weight:	510.63
Target:	Bacterial
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (489.59 mM; Need ultrasonic)
 H₂O : ≥ 100 mg/mL (195.84 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.9584 mL	9.7918 mL	19.5837 mL
	5 mM	0.3917 mL	1.9584 mL	3.9167 mL
	10 mM	0.1958 mL	0.9792 mL	1.9584 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.19 mg/mL (4.29 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (4.07 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (4.07 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Gut restricted-7 (GR-7) is a potent, covalent and orally active pan-bile salt hydrolase (BSH) inhibitor. Gut restricted-7 has a tissue-selective and is restricted to the gut. Gut restricted-7 decreases gut bacterial BSHs and decreases deconjugated bile acid levels in feces of mice^[1].

IC₅₀ & Target

Bile salt hydrolase (BSH)^[1]

In Vitro

BSH Inhibitor Gut restricted-7 (GR-7) (60 μM) does not affect epithelial barrier integrity of Caco-2 cells, suggesting that this

compound is relatively nontoxic. Gut restricted-7 also does not affect microbial biomass^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

The C57BL/6 mice fed with either powdered chow containing 0.09% Gut restricted-7 (GR-7) (w/w) for 1 d day or powdered chow alone. Gut restricted-7 significant inhibits the BSH activity in the feces of inhibitortreated mice 8 h postdiet change. 20picomol/mg wet mass (~20 μM) of Gut restricted-7 in cecal contents is detected^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA