Salcaprozate sodium

Cat. No.: HY-114299

CAS No.: 203787-91-1

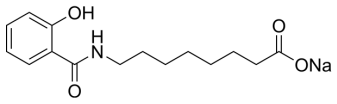
Molecular Formula: $C_{15}H_{20}NNaO_4$

Molecular Weight: 301.31

Target: Others

Pathway: Others

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 : 50 mg/mL (165.94 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3188 mL	16.5942 mL	33.1884 mL
	5 mM	0.6638 mL	3.3188 mL	6.6377 mL
	10 mM	0.3319 mL	1.6594 mL	3.3188 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.30 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Salcaprozate sodium (SNAC), an oral absorption promoter, and has the potential as a delivery agent for oral forms of heparin and insulin. Salcaprozate sodium could increase passive transcellular permeation across small intestinal epithelia based on increased lipophilicity arising from non-covalent macromolecule complexation[1][2].

In Vitro

SNAC (12.5-400 μg/mL; 24 h) has no toxicity to Caco-2 cells, and the survival percentage is above 90% when SNAC is 200 μg/mL[3].

SNAC (50 and 200 μg/mL) improves the apparent permeability coeffcient (Papp) of RA and SA-B by 2.14-fold and 3.68-fold compared with the Papp of SAs solution[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

SNAC improves the oral absorption of both R1 and SAs and enhances bioavailability in rats[3].
?SNAC (2000 mg/kg/d; oral gavage for 13 weeks) related mortality is evident only at the 2000-mg/kg/d level, 20% among males and 50% among females; no clear cause of death is evident[1].
?SNAC (100-1000 mg/kg/d; oral gavage for 13 weeks) induces no mortality in the Wistar rat study at doses up to 1000 mg/kg/d[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Sprague-Dawley rats (6-7 weeks)[1]
Dosage:	2000 mg/kg/d
Administration:	Oral gavage for 13 weeks
Result:	Induced 20% and 50% mortality in males and females at the dose of 2000 mg/kg/d.

REFERENCES

[1]. Riley MGI, et, al. Subchronic oral toxicity of salcaprozate sodium (SNAC) in Sprague-Dawley and Wistar rats. Int J Toxicol. Jul-Aug 2009; 28(4):278-93.

[2]. Twarog C, et, al. Intestinal Permeation Enhancers for Oral Delivery of Macromolecules: A Comparison between Salcaprozate Sodium (SNAC) and Sodium Caprate (C 10). Pharmaceutics. 2019 Feb 13; 11(2):78.

[3]. Li Y, et, al. Impact of Sodium N-[8-(2-Hydroxybenzoyl)amino]-caprylate on Intestinal Permeability for Notoginsenoside R1 and Salvianolic Acids in Caco-2 Cells Transport and Rat Pharmacokinetics. Molecules. 2018 Nov 16; 23(11):2990.

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