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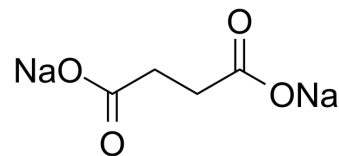
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Disodium succinate

Cat. No.:	HY-W015410
CAS No.:	150-90-3
Molecular Formula:	C ₄ H ₄ Na ₂ O ₄
Molecular Weight:	162.05
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
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	H ₂ O : 25 mg/mL (154.27 mM; Need ultrasonic)					
	DMSO : < 1 mg/mL (ultrasonic) (insoluble or slightly soluble)					
	Preparing Stock Solutions	Solvent	Mass	1 mg	5 mg	10 mg
		Concentration				
		1 mM		6.1709 mL	30.8547 mL	61.7093 mL
5 mM			1.2342 mL	6.1709 mL	12.3419 mL	
10 mM		0.6171 mL	3.0855 mL	6.1709 mL		
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (617.09 mM); Clear solution; Need ultrasonic					

BIOLOGICAL ACTIVITY

Description	Disodium succinate is an anti-anxiety agent with oral activity. Disodium succinate is the salt form of Succinic acid. Disodium succinate is an intermediate product of the tricarboxylic acid cycle. Disodium succinate is an important platform chemical. Disodium succinate can be used as surfactant, additive, ion chelating agent, flavoring agent and other applications in chemical, pharmaceutical and food fields ^{[1][2][3][4][5]} .	
IC₅₀ & Target	Microbial Metabolite	Human Endogenous Metabolite
In Vivo	Succinic acid (3-6 mg/kg; p.o.; Single dose) has anti-anxiety effects in mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Elevated plus-maze test mice model ^[3]

Dosage:	3 mg/kg, 6 mg/kg
Administration:	Oral gavage (p.o.); Single dose
Result:	At doses of 3.0 and 6.0 mg/kg significantly increased the percentage of mice that entered the open arm and the percentage of time that the open arm stayed.
Animal Model:	Food intake mice model [3]
Dosage:	3 mg/kg, 6 mg/kg, 12 mg/kg
Administration:	Intraperitoneal injection (i.p.); Single dose
Result:	Significantly increased the mice's food intake within 5 minutes after administration.
Animal Model:	Stress-induced hyperthermia test mice model[3]
Dosage:	1.5 mg/kg, 3 mg/kg, 6 mg/kg
Administration:	Oral gavage (p.o.); Single dose
Result:	Inhibited stress-induced hyperthermia at a dose of 1.5 mg/kg.

CUSTOMER VALIDATION

- Cell Host Microbe. 2023 May 10;31(5):781-797.e9.
- Water Air Soil Pollut. 232, 473 (2021).
- Research Square Print. December 9th, 2022.

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REFERENCES

- [1]. Zhang YJ, et al. Optimization of succinic acid fermentation with *Actinobacillus succinogenes* by response surface methodology (RSM). *J Zhejiang Univ Sci B*. 2012 Feb;13(2):103-10.
- [2]. Johns A T. The production of propionic acid by decarboxylation of succinic acid in a bacterial fermentation[J]. *The Biochemical journal*, 1948, 42(1): ii.
- [3]. Chen SW, Xin Q, Kong WX, Min L, Li JF. Anxiolytic-like effect of succinic acid in mice. *Life Sci*. 2003 Nov 7;73(25):3257-64. doi: 10.1016/j.lfs.2003.06.017. PMID: 14561530.
- [4]. Xu J, et al. Microbial succinic acid, its polymer poly (butylene succinate), and applications[J]. *Plastics from bacteria: Natural functions and applications*, 2010: 347-388.
- [5]. Bechthold I, et al. Succinic acid: a new platform chemical for biobased polymers from renewable resources[J]. *Chemical Engineering & Technology: Industrial Chemistry-Plant Equipment-Process Engineering-Biotechnology*, 2008, 31(5): 647-654.

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

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