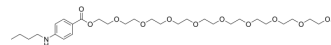


Benzonatate

Cat. No.:	HY-B1551		
CAS No.:	104-31-4		
Molecular Formula:	C ₃₀ H ₅₃ NO ₁₁		
Molecular Weight:	603.74		
Target:	Sodium Channel		
Pathway:	Membrane Transporter/Ion Channel		
Storage:	Pure form	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (165.63 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.6563 mL	8.2817 mL	16.5634 mL
	5 mM	0.3313 mL	1.6563 mL	3.3127 mL
	10 mM	0.1656 mL	0.8282 mL	1.6563 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: ≥ 2.5 mg/mL (4.14 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.14 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (4.14 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Benzonatate (Benzononatine) is a peripheral oral antitussive that dampens the activity of cough stretch receptors. Benzonatate has sodium channel-blocking properties and local anesthetic effects on the respiratory stretch receptors due to a tetracaine-like metabolite^{[1][2]}.

REFERENCES

[1]. Thimann DA, et al. Benzonatate toxicity in a teenager resulting in coma, seizures, and severe metabolic acidosis. J Pediatr Pharmacol Ther. 2012;17(3):270-273.

[2]. Teo S, et al. The Antitussive Benzonatate Is Not Tumorigenic in Rodent Carcinogenicity Studies. Toxicol Pathol. 2018;46(6):683-692.

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

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