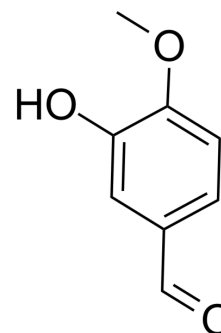


Isovanillin

Cat. No.:	HY-I0637
CAS No.:	621-59-0
Molecular Formula:	C ₈ H ₈ O ₃
Molecular Weight:	152.15
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (657.25 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	6.5725 mL	32.8623 mL	65.7246 mL
5 mM		1.3145 mL	6.5725 mL	13.1449 mL	
	10 mM	0.6572 mL	3.2862 mL	6.5725 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (16.43 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Isovanillin is an aldehyde oxidase inhibitor ^[1] . Antispasmodic activities ^[2] . Antidiarrheal activities ^[3] .
IC₅₀ & Target	Aldehyde oxidase ^[1]
In Vitro	<p>Isovanillin is not a substrate for aldehyde oxidase and therefore it is metabolized to isovanillic acid predominantly by aldehyde dehydrogenase^[1].</p> <p>Isovanillin is relaxant of ileum contractions induced by 5-HT (IC₅₀=356±50μM) ^[2].</p>

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

In Vivo

Isovanillin (2 mg/kg & 5 mg/kg) and iso-acetovanillon (2 mg/kg & 5 mg/kg) both have antidiarrheal and anti-motility effect on gastrointestinal tract^[3].

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

REFERENCES

- [1]. Panoutsopoulos GI, et al. Enzymatic oxidation of vanillin, isovanillin and protocatechuic aldehyde with freshly prepared Guinea pig liver slices. Cell Physiol Biochem. 2005;15(1-4):89-98.
- [2]. Sadraei H, et al. Antispasmodic activity of isovanillin and isoacetovanillon in comparison with Pycnocyclus spinosa Decne.exBoiss extract on rat ileum. Res Pharm Sci. 2014 May-Jun;9(3):187-92.
- [3]. Sadraei H, et al. Antidiarrheal activities of isovanillin, iso-acetovanillon and Pycnocyclus spinosa Decne ex.Boiss extract in mice. Res Pharm Sci. 2014 Mar-Apr;9(2):83-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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