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Zuschläge

- Mindermengenzuschlag
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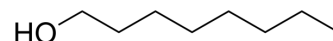
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1-Octanol

Cat. No.:	HY-W032013
CAS No.:	111-87-5
Molecular Formula:	C ₈ H ₁₈ O
Molecular Weight:	130.23
Target:	Endogenous Metabolite; Calcium Channel
Pathway:	Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Store at room temperature 3 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (767.87 mM; Need ultrasonic)					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
		1 mM		7.6787 mL	38.3936 mL	76.7872 mL
		5 mM		1.5357 mL	7.6787 mL	15.3574 mL
		10 mM		0.7679 mL	3.8394 mL	7.6787 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 (19.20 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (19.20 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil					
	Solubility: ≥ 2.5 mg/mL (19.20 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	1-Octanol (Octanol), a saturated fatty alcohol, is a T-type calcium channels (T-channels) inhibitor with an IC ₅₀ of 4 μM for native T-currents ^[1] . 1-Octanol is a highly attractive biofuel with diesel-like properties ^[2] .	
IC ₅₀ & Target	T-type calcium channel	Microbial Metabolite
In Vitro	1-octanol inhibits native T-currents at subanesthetic concentrations with an IC ₅₀ of approximately 4 μM. In contrast, 1-octanol is up to 30-fold less potent in inhibiting recombinant Ca _v 3.3 T-channels heterologously expressed in human embryonic kidney cells ^[1] .	

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

CUSTOMER VALIDATION

- Nat Neurosci. 2024 Jun 11.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Joksovic PM, et al. Mechanisms of inhibition of T-type calcium current in the reticular thalamic neurons by 1-octanol: implication of the protein kinase C pathway. Mol Pharmacol. 2010 Jan;77(1):87-94.
- [2]. Akhtar MK, et al. Microbial production of 1-octanol: A naturally excreted biofuel with diesel-like properties. Metab Eng Commun. 2014 Nov 13;2:1-5.
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Caution: Product has not been fully validated for medical applications. For research use only.

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