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Produktinformation

- Forschungsprodukte & Biochemikalien
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- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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1-Octanol

Cat. No.: HY-W032013

CAS No.: 111-87-5

Molecular Formula: $C_8H_{18}O$

Molecular Weight: 130.23

Target: Endogenous Metabolite; Calcium Channel

Pathway: Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Neuronal Signaling

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 (767.87 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	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 $Ca_V3.3$ 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.

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.

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

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