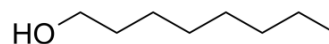


1-Octanol

| | | | |
|---------------------------|---------------------------------------------------------------------------------|-------|----------|
| Cat. No.: | HY-W032013 | | |
| CAS No.: | 111-87-5 | | |
| Molecular Formula: | C ₈ H ₁₈ O | | |
| Molecular Weight: | 130.23 | | |
| Target: | Calcium Channel; Endogenous Metabolite | | |
| Pathway: | Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease | | |
| 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 : 250 mg/mL (1919.68 mM; Need ultrasonic) | | | | |
| | | Solvent Concentration | Mass 1 mg | 5 mg | 10 mg |
| | Preparing Stock Solutions | 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 | <ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.25 mg/mL (17.28 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.25 mg/mL (17.28 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.25 mg/mL (17.28 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] . | |
| IC₅₀ & Target | T-type calcium channel 4 μM (IC ₅₀) | Human Endogenous 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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