N-Acetylprocainamide

Cat. No.: HY-B1109

CAS No.: 32795-44-1

Molecular Formula: $C_{15}H_{23}N_3O_2$

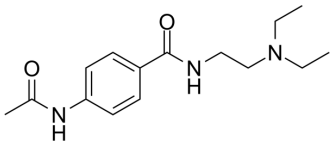
Molecular Weight: 277.36

Target: Potassium Channel; Drug Metabolite

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

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (360.54 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.6054 mL	18.0271 mL	36.0542 mL
5 mM	0.7211 mL	3.6054 mL	7.2108 mL
10 mM	0.3605 mL	1.8027 mL	3.6054 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 (9.01 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (9.01 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (9.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

N-Acetylprocainamide is a class III antiarrhythmic, which blocks K^+ channels.

IC_{50} & Target

K^+ channel[1]

In Vitro

N-Acetylprocainamide is a K^+ blocker. N-Acetylprocainamide decreases the tensions induced by K^+ and methacholine. The pIC_{50} values for N-acetylprocainamide against the contractions induced by 0.3 and 1 μM methacholine are 2.80 ± 0.03 and

2.65 ± 0.02, respectively. And such a relaxant effect of N-Acetylprocainamide is inhibited by K^+ channel blockers[1]. N-Acetylprocainamide shows no effect on Na^+ absorption or Cl^- secretion[2].

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

CUSTOMER VALIDATION

- ACS Omega. 2020 Nov 15;5(46):29935-29942.

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REFERENCES

[1]. Nakahara T, et al. Role of K+ channels in N-acetylprocainamide-induced relaxation of bovine tracheal smooth muscle. Eur J Pharmacol. 2001 Mar 9;415(1):73-8.

[2]. Plass H, et al. Class I antiarrhythmics inhibit Na+ absorption and Cl- secretion in rabbit descending colon epithelium. Naunyn Schmiedebergs Arch Pharmacol. 2005 Jun;371(6):492-9.

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