Desglymidodrine

Cat. No.: HY-114794

CAS No.: 3600-87-1

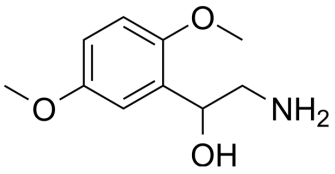
Molecular Formula: $C_{10}H_{15}NO_3$

Molecular Weight: 197.23

Target: Adrenergic Receptor; Drug Metabolite

Pathway: GPCR/G Protein; Neuronal Signaling; Metabolic Enzyme/Protease

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (253.51 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	5.0702 mL	25.3511 mL	50.7022 mL
	5 mM	1.0140 mL	5.0702 mL	10.1404 mL
	10 mM	0.5070 mL	2.5351 mL	5.0702 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 (12.68 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (12.68 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (12.68 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Desglymidodrine (ST 1059), the active metabolite of Midodrine (HY-12749), is a selective α_1-adrenoceptor agonist. Desglymidodrine is an effective arterial and venous vasoconstrictor and can be used to regulate blood pressure[1][2].

IC_{50} & Target				
	α1A-adrenergic receptor 5.89 (pKi)	α1B-adrenergic receptor 5.16 (pKi)	rat alpha$_{1D}$-adrenergic receptor 5.78 (pKi)	human α2A-adrenoceptor 5.83 (pKi)

In Vitro

Desglymidodrine (ST 1059) (1-1000 μM) affects vein contraction with the pD2 values (negative logarithm of the concentration which causes 50% of the maximum possible effect) of 4.64 (-log mol/L) in dog isolated femoral veins and 4.48 (-log mol/L) in

isolated human saphenous veins, respectively[1].

Desglymidodrine (ST 1059) acts on α_{1A}, α_{1B}, α_{1D} in rat and α_{2A} in human adrenoceptor with the pK_i values of 5.89, 5.16, 5.78 and 5.83, respectively[2].

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

REFERENCES

[1]. K Nakayama, et al. Effects of anisotropine methylbromide (Valpin) and its mixture with sulpyrine on vocalization response and spasm of intestine induced by acetylcholine in dogs. Jpn J Pharmacol. 1972 Apr;22(2):215-20.

[2]. Steven ABuckner, et al. ABT-866, a novel α1A-adrenoceptor agonist with antagonist properties at the α1B- and α1D-adrenoceptor subtypes,European Journal of Pharmacology,Volume 449, Issues 1–2,2002,Pages 159-1

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