Glycerol phenylbutyrate

Cat. No.: HY-B2087

CAS No.: 611168-24-2

Molecular Formula: $C_{33}H_{38}O_6$

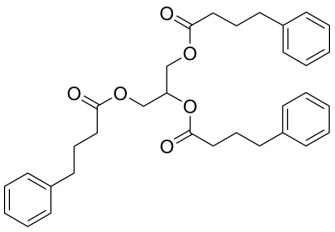
Molecular Weight: 530.65

Target: Sigma Receptor

Pathway: 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 (188.45 mM; Need ultrasonic)
Ethanol : 50 mg/mL (94.22 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8845 mL	9.4224 mL	18.8448 mL
5 mM	0.3769 mL	1.8845 mL	3.7690 mL
10 mM	0.1884 mL	0.9422 mL	1.8845 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: ≥ 2.25 mg/mL (4.24 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.25 mg/mL (4.24 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Glycerol phenylbutyrate is a sigma-2 (σ2) receptor ligand, with a pK_i of 8.02. Glycerol phenylbutyrate (GPB) is a new generation ammonia scavenger agent[1][2].

IC_{50} & Target

Sigma 2 Receptor

In Vivo

Glycerol phenylbutyrate (GPB) has the potential for the treatment of hyperammonemia. Glycerol phenylbutyrate (GPB) may have therapeutic potential in additional conditions such as chronic hepatic encephalopathy or other inherited metabolic disorders[1][2].

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

REFERENCES

[1]. Rescifina A, et al. Development of a Sigma-2 Receptor affinity filter through a Monte Carlo based QSAR analysis. Eur J Pharm Sci. 2017 Aug 30;106:94-101.

[2]. Oishi K, et al. Glycerol phenylbutyrate for the chronic management of urea cycle disorders. Expert Rev Endocrinol Metab. 2014 Sep;9(5):427-434.

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

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