Compound 48/80 trihydrochloride

Cat. No.: HY-130592

CAS No.: 848035-21-2

Molecular Formula: $C_{32}H_{48}Cl_3N_3O_3$

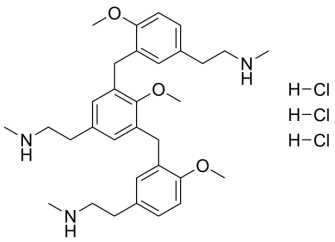
Molecular Weight: 629.1

Target: Phospholipase

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 2 years; -20°C, 1 year (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 25 mg/mL (39.74 mM; Need ultrasonic)

DMSO : 10 mg/mL (15.90 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.5896 mL	7.9479 mL	15.8957 mL
5 mM	0.3179 mL	1.5896 mL	3.1791 mL
10 mM	0.1590 mL	0.7948 mL	1.5896 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 (3.97 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.97 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Compound 48/80 trihydrochloride (C48/80 trihydrochloride) is a mixture of condensation products of N-methyl-p-methoxyphenethylamine with formaldehyde. Compound 48/80 trihydrochloride is also a histamine releaser and a mast cell degranulator. Compound 48/80 inhibits phosphatidylinositol-specific phospholipase C activity from human platelets [1][2][3].

In Vitro

Compound 48/80 trihydrochloride (C48/80 trihydrochloride) inhibits both cytosolic and particulate phosphatidylinositol-specific phospholipase C activities with a similar efficiency; IC_{50} values are 2.1 μg/ml (supernatant) and 5.0 μg /ml (particulate fraction). The aggregation of human platelets induced by ADP and PAF-acether is inhibited by Compound 48/80 [1].

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

In Vivo

Compound 48/80 trihydrochloride (0.75 mg/kg; i.p.; Killed after 0.5, 3 or 6 h) increases serum serotonin, histamine and corticosterone levels at 0.5 h, but their increases were reduced thereafter[3].
Compound 48/80 trihydrochloride causes oxidative stress in rat adrenal gland through mast cell degranulation[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	7-week-old Wistar male rats (fasted for 24 hours)[3]
Dosage:	0.75 mg/kg
Administration:	Intraperitoneal injection; Killed after 0.5, 3 or 6 h
Result:	Serum histamine and serotonin concentrations significantly higher than those in untreated control rats at 0.5 h after treatment. The increased serum histamine and serotonin concentrations in rats decreased time-dependently thereafter.

REFERENCES

[1]. Bronner C, et al. Compound 48/80 is a potent inhibitor of phospholipase C and a dual modulator of phospholipase A2 from human platelet. Biochim Biophys Acta. 1987 Aug 15;920(3):301-5.

[2]. Schemann M, et al. The mast cell degranulator compound 48/80 directly activates neurons. PLoS One. 2012;7(12):e52104.

[3]. Kaida S, et al. Compound 48/80 causes oxidative stress in the adrenal gland of rats through mast cell degranulation. Free Radic Res. 2010 Feb;44(2):171-80.

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