Trequinsin hydrochloride

Cat. No.: HY-18740A

CAS No.: 78416-81-6

Molecular Formula: $C_{24}H_{28}ClN_3O_3$

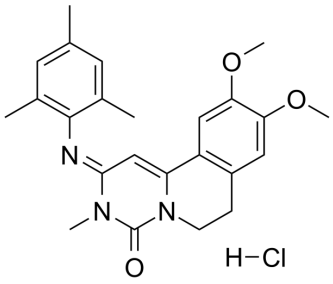
Molecular Weight: 441.95

Target: Phosphodiesterase (PDE)

Pathway: Metabolic Enzyme/Protease

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

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (141.42 mM; Need ultrasonic)

H_2O : 50 mg/mL (113.13 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2627 mL	11.3135 mL	22.6270 mL
5 mM	0.4525 mL	2.2627 mL	4.5254 mL
10 mM	0.2263 mL	1.1313 mL	2.2627 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: ≥ 2.08 mg/mL (4.71 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.71 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Trequinsin hydrochloride (HL 725) is an extremely potent inhibitor of platelet CAMP phosphodiesterase (PDE), with an IC_{50} of 0.25 nM. Trequinsin hydrochloride (HL 725) is an extremely potent inhibitor of the aggregation of human platelets induced in vitro by ADP, collagen, thrombin and epinephrine[1][2][3].

In Vitro

Trequinsin hydrochloride exerts besides its cardiovascular and antihypertensive qualities very potent antiplatelet activities [1].

Trequinsin hydrochloride is an efficacious agonist of $[Ca^{2+}]_i$[3].

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

Cell Viability Assay[3]	
Cell Line:	Samples from healthy volunteer research donors with normal sperm motility parameters in agreement with World Health Organization 2010 criteria.
Concentration:	10 μM.
Incubation Time:	20 min.
Result:	Caused a concentrationdependent increase in $[Ca^{2+}]_i$ (EC_{50} = 6.4 μM [95% confidence interval (CI): 4.1-9.9 μM]).

REFERENCES

[1]. D Ruppert,, et al. HL 725, an extremely potent inhibitor of platelet phosphodiesterase and induced platelet aggregation in vitro. Life Sci. 1982 Nov 8;31(19):2037-43.

[2]. K C Agarwal, et al. Role of plasma adenosine in the antiplatelet action of HL 725, a potent inhibitor of cAMP phosphodiesterase: species differences. Thromb Res. 1987 Jul 15;47(2):191-200.

[3]. Rachel C McBrinn, et al. Novel pharmacological actions of trequinsin hydrochloride improve human sperm cell motility and function. Br J Pharmacol. 2019 Dec;176(23):4521-4536.

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