Ticlopidine hydrochloride

Cat. No.: HY-B0153A

CAS No.: 53885-35-1

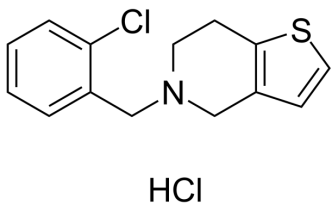
Molecular Formula: $C_{14}H_{15}Cl_2NS$

Molecular Weight: 300.25

Target: Adenosine Receptor

Pathway: GPCR/G Protein

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

H_2O : 50 mg/mL (166.53 mM; Need ultrasonic)
DMSO : 50 mg/mL (166.53 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.3306 mL	16.6528 mL	33.3056 mL
5 mM	0.6661 mL	3.3306 mL	6.6611 mL
10 mM	0.3331 mL	1.6653 mL	3.3306 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 8.33 mg/mL (27.74 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (8.33 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (8.33 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (8.33 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Ticlopidine hydrochloride is an adenosine diphosphate (ADP) receptor inhibitor against platelet aggregation with IC50 of ~2 μM.Target: Adenosine diphosphate (ADP)Ticlopidine (trade name Ticlid) is an antiplatelet drug in the thienopyridine family. Ticlopidine hydrochloride inhibits platelet aggregation with IC50 of ~2 μM in men. Like clopidogrel, it is an adenosine diphosphate (ADP) receptor inhibitor. It is used in patients in whom aspirin is not tolerated, or in whom dual antiplatelet therapy is desirable. Because it has been reported to increase the risk of thrombotic thrombocytopenic purpura (TTP) and neutropenia, its use has largely been supplanted by the newer drug, clopidogrel, which is felt to have a much lower

hematologic risk. Its niche role as an alternative in those patients who do not tolerate Clopidogrel has now been superdeded by Ticagrelor and Prasugrel. The usual dose is 250 mg twice daily by the oral route.Ticlopidine hydrochloride, when orally administered to rats, results in activation of basal and prostaglandin E1 (PGE1)-stimulated adenylate cylase activity through increase in affinity of the cyclase in platelet membrane to PGE1, although it failed to affect adenosine- or sodium fluoride-stimulated activity of the enzyme.

REFERENCES

[1]. Thebault JJ, et al. Effects of ticlopidine, a new platelet aggregation inhibitor in man. Clin Pharmacol Ther. 1975 Oct;18(4):485-90.

[2]. Ashida SI, et al. Mode of action of ticlopidine in inhibition of platelet aggregation in the rat. Thromb Haemost. 1979 Apr 23;41(2):436-49.

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