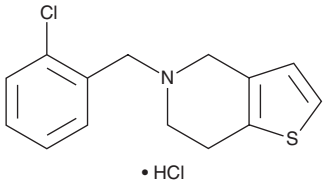
PRODUCT INFORMATION

Ticlopidine (hydrochloride)

Item No. 20770

CAS Registry No.: 53885-35-1
Formal Name: 5-[(2-chlorophenyl)methyl]-4,5,6,7-tetrahydro-thieno[3,2-c]pyridine, monohydrochloride
MF: $C_{14}H_{14}ClNS \bullet HCl$
FW: 300.2
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ticlopidine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ticlopidine (hydrochloride) in the solvent of choice. Ticlopidine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of ticlopidine (hydrochloride) in ethanol is approximately 0.5 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ticlopidine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ticlopidine (hydrochloride) in PBS, pH 7.2, is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ticlopidine is a thienopyridine $P2Y_{12}$ receptor antagonist.[1] It inhibits aggregation of human platelets induced by collagen, arachidonic acid (Item No. 90010), and ADP (Item No. 16778; IC_{50}s = 75, 600, and 1,300 µM, respectively).[2] It also inhibits ADP-induced aggregation of rat platelets and decreases thrombus weight *in vivo* in a rat model of arterio-venous shunt thrombosis when administered at a dose of 100 mg/kg.[3] Ticlopidine (300 mg/kg) inhibits healing of acetic acid-induced gastric ulcers in rats.[4] Formulations containing ticlopidine have been used in the prevention of thrombotic stroke.

References

1. Porto, I., Giubilato, S., De Maria, G.L., *et al.* Platelet P2Y12 receptor inhibition by thienopyridines: Status and future. *Expert Opin. Investig. Drugs* **18(9)**, 1317-1332 (2009).
2. Bruno, J.J. The mechanisms of action of ticlopidine. *Thromb. Res. Suppl.* **4**, 59-67 (1983).
3. Sugidachi, A., Asai, F., Ogawa, T., *et al.* The *in vivo* pharmacological profile of CS-747, a novel antiplatelet agent with platelet ADP receptor antagonist properties. *Br. J. Pharmacol.* **129(7)**, 1439-1446 (2000).
4. Ma, L., Elliott, S.N., Cirino, G., *et al.* Platelets modulate gastric ulcer healing: Role of endostatin and vascular endothelial growth factor release. *Proc. Nat. Acad. Sci. USA* **98(11)**, 6470-6475 (2001).

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