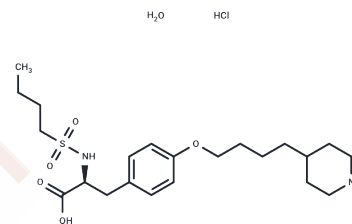


Tirofiban hydrochloride monohydrate

Chemical Properties

| | |
|-------------------|--|
| CAS No. : | 150915-40-5 |
| Formula: | C ₂₂ H ₃₉ ClN ₂ O ₆ S |
| Molecular Weight: | 495.07 |
| Storage: | Keep away from direct sunlight, Store under nitrogen Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small> |



Biological Description

| | |
|---------------|--|
| Description | Tirofiban(MK383) hydrochloride monohydrate is a non-peptide glycoprotein IIb/IIIa antagonist. |
| Targets(IC50) | ATPase, Integrin |
| In vitro | <p>METHODS: HUVEC cells were cultured in 24-well plates. The effect of 0.12, 0.25, 1, and 3 µg/ml Tirofiban (MK383) hydrochloride monohydrate on cell growth was determined using cell counting method. Cells were harvested after 72 h and counted using trypan blue.</p> <p>RESULTS At a concentration of 0.25 µg/ml, the number of cells in the Tirofiban group increased compared with the group without Tirofiban. Tirofiban can induce the growth of HUVEC cells. [1]</p> <p>METHODS: HUVEC cells were treated with Tirofiban (1mg/mL) at different time points (0, 1, 2, 3, 4 and 5 hours).</p> <p>RESULTS After Tirofiban treatment, the amount of VEGF produced by HUVECs gradually increased and reached a peak at 2 hours. [2]</p> |
| In vivo | <p>METHODS: Rats were intravenously injected with Tirofiban (MK383) hydrochloride monohydrate (200 µg/kg). Fifteen minutes later, the left renal pedicle was occluded with a small microvascular forceps, and renal ischemia was induced for 45 minutes. Blood was collected 24 hours after reperfusion, and the left kidney was taken for analysis.</p> <p>RESULTS Tirofiban can reduce SCR and BUN levels in I/R-injured kidneys, improve renal tissue pathological changes, and reduce ROS generation, cell apoptosis, and leukocyte infiltration. [3]</p> <p>METHODS: 60 µg/kg Tirofiban was administered as an intravenous bolus injection through the tail vein of rats 30 minutes before reperfusion, and the cardiac function of the rats was observed.</p> <p>RESULTS Tirofiban improved cardiac function, with lower left ventricular end-systolic blood pressure levels, left ventricular pressure maximum change rates of increase and</p> |

Solubility Information

A DRUG SCREENING EXPERT

| | |
|------------|---|
| Solubility | DMSO: 250 mg/mL (504.98 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|------------|------------|
| 1 mM | 2.0199 mL | 10.0996 mL | 20.1992 mL |
| 5 mM | 0.404 mL | 2.0199 mL | 4.0398 mL |
| 10 mM | 0.202 mL | 1.010 mL | 2.0199 mL |
| 50 mM | 0.0404 mL | 0.202 mL | 0.404 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Giordano A, et al. Tirofiban induces VEGF production and stimulates migration and proliferation of endothelial cells. *Vascul Pharmacol.* 2014 May-Jun;61(2-3):63-71.
- Gao HQ, et al. Tirofiban Promotes the Proliferation of Human Umbilical Vein Endothelial Cells In Vitro Via Enhanced Vascular Endothelial Growth Factor Expression. *Transplant Proc.* 2020 Jan-Feb;52(1):419-422.
- Guan W, et al. Protective effects of tirofiban on ischemia/reperfusion-induced renal injury in vivo and in vitro. *Eur J Pharmacol.* 2015 Aug 15;761:144-52.
- Liu X, et al. Effects of tirofiban on the reperfusion-related no-reflow in rats with acute myocardial infarction. *J Geriatr Cardiol.* 2013 Mar;10(1):52-8.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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