

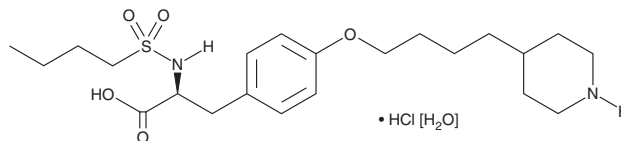
PRODUCT INFORMATION



Tirofiban (hydrochloride hydrate)

Item No. 23392

CAS Registry No.: 150915-40-5
Formal Name: N-(butylsulfonyl)-O-[4-(4-piperidinyl)butyl]-L-tyrosine, monohydrochloride, monohydrate
MF: $C_{22}H_{36}N_2O_5S \cdot HCl [H_2O]$
FW: 495.1
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 228, 277 nm
Supplied as: A crystalline solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

Tirofiban (hydrochloride hydrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the tirofiban (hydrochloride hydrate) in the solvent of choice. Tirofiban (hydrochloride hydrate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of tirofiban (hydrochloride hydrate) in these solvents is approximately 30 mg/ml.

Tirofiban (hydrochloride hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tirofiban (hydrochloride hydrate) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Tirofiban (hydrochloride hydrate) has a solubility of approximately 0.05 mg/ml in a 1:20 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tirofiban is a potent nonpeptide glycoprotein IIb/IIIa antagonist (GPIIb/IIIa; $IC_{50} = 5$ nM in a radioligand binding assay).¹ It inhibits GPIIb/IIIa-dependent platelet aggregation with an IC_{50} value of 11 nM. Tirofiban is selective for platelet GPIIb/IIIa, only inhibiting human umbilical vein endothelial cell (HUVEC) attachment to microtiter plates containing fibrinogen (Fg), human vitronectin (Vn), or human fibronectin (Fn) at concentrations $>10,000$ -fold above the IC_{50} for platelet aggregation. Tirofiban (300 and 1,000 $\mu g/kg$ per minute, i.v.) prevents occlusive thrombosis and reduces thrombus mass in a canine model of electrically-induced coronary artery occlusive thrombosis.² Formulations containing tirofiban have been used to prevent thrombotic occlusion associated with coronary angioplasty.³

References

1. Hartman, G.D., Egbertson, M.S., Halczenko, W., *et al.* Non-peptide fibrinogen receptor antagonists. 1. Discovery and design of exosite inhibitors. *J. Med. Chem.* **35**(24), 4640-4642 (1992).
2. Lynch, J.J., Jr., Cook, J.J., Sitko, G.R., *et al.* Nonpeptide glycoprotein IIb/IIIa inhibitors. 5. Antithrombotic effects of MK-0383. *J. Pharmacol. Exp. Ther.* **272**(1), 20-32 (1995).
3. Investigators, T.R. Effects of platelet glycoprotein IIb/IIIa blockade with tirofiban on adverse cardiac events in patients with unstable angina or acute myocardial infarction undergoing coronary angioplasty. *Circulation* **96**(5), 1445-1453 (1997).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM