

PRODUCT INFORMATION



Eptifibatide (acetate)

Item No. 21578

CAS Registry No.: 881997-86-0
Formal Name: N⁶-(aminoiminomethyl)-N²-(3-mercapto-1-oxopropyl)-L-lysylglycyl-L- α -aspartyl-L-tryptophyl-L-prolyl-L-cysteinamide, cyclic (1 \rightarrow 6)-disulfide, acetate

MF: C₃₅H₄₉N₁₁O₉S₂ • XC₂H₄O₂

FW: 832.0

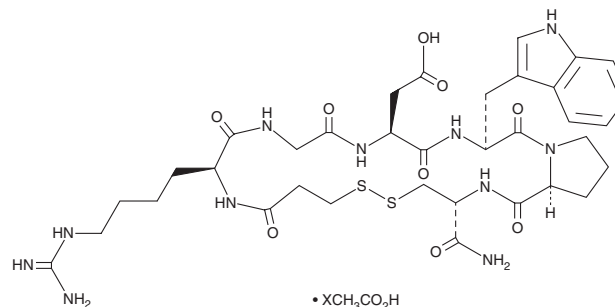
Purity: \geq 95%

UV/Vis.: λ_{max} : 222, 283 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

Eptifibatide (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the eptifibatide (acetate) in the solvent of choice, which should be purged with an inert gas. Eptifibatide (acetate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of eptifibatide (acetate) in these solvents is approximately 5, 14, and 30 mg/ml, respectively.

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 eptifibatide (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of eptifibatide (acetate) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Eptifibatide is a potent glycoprotein IIb/IIIa antagonist (GPIIb/IIIa; $K_d = 120$ nM) that inhibits platelet aggregation.^{1,2} Eptifibatide prevents binding of the adhesion proteins fibrinogen and von Willebrand factor to GPIIb/IIIa on the surface of activated platelets to prevent aggregation and thrombus formation.¹ It inhibits ADP-induced citrated blood aggregation ($IC_{50} = 0.11$ - 0.22 μ g/ml) *in vitro* and *in vivo* ($IC_{50} = 52$ μ g/ml in porcine plasma).^{1,4} Formulations containing eptifibatide have been used to reduce risk of thrombolysis in myocardial infarction in patients undergoing percutaneous coronary intervention.⁵

References

1. Harder, S., Klinkhardt, U., Graff, J., *et al.* In vitro dose response to different GPIIb/IIIa-antagonists: Inter-laboratory comparison of various platelet function tests. *Thromb. Res.* **102(1)**, 39-48 (2001).
2. Moser, M., Bertram, U., Peter, K., *et al.* Abciximab, eptifibatide, and tirofiban exhibit dose-dependent potencies to dissolve platelet aggregates. *J. Cardiovasc. Pharmacol.* **41(4)**, 586-592 (2003).
3. Scarborough, R.M. Development of eptifibatide. *Am. Heart J.* **138(6 Pt 1)**, 1093-1104 (1999).
4. Ciborowski, M. and Tomasiak, M. The *in vitro* effect of eptifibatide, a glycoprotein IIb/IIIa antagonist, on various responses of porcine blood platelets. *Acta Pol. Pharm.* **66(3)**, 235-242 (2009).
5. Zhou, X., Wu, X., Sun, H., *et al.* Efficacy and safety of eptifibatide versus tirofiban in acute coronary syndrome patients: A systematic review and meta-analysis. *J. Evid. Based Med.* **10(2)**, 136-144 (2017).

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.

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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