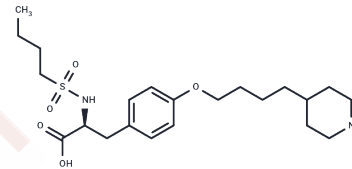


Tirofiban

Chemical Properties

CAS No. :	144494-65-5
Formula:	C ₂₂ H ₃₆ N ₂ O ₅ S
Molecular Weight:	440.6
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Tirofiban (L700462) (MK-383) is a selective platelet GPIIb/IIIa antagonist which inhibits platelet aggregation with IC ₅₀ of 9 nM.
Targets(IC ₅₀)	Integrin
In vitro	Tirofiban (MK-383, Aggrastat) is a nonpeptide derivative of tyrosine that selectively inhibits the GP-IIb/IIIa receptor, with minimal effects on the α _v β 3 vitronectin receptor. [1] [2] It inhibits platelet aggregation of gel-filtered platelets induced by 10 μ M ADP with IC ₅₀ of 9 nM, but the IC ₅₀ for inhibition of human umbilical vein adhesion to vitronectin, which depends on α _v β 3 vitronectin receptors, is 62 μ Mol/L. [3]
In vivo	Tirofiban (10 to 500 mg/kg or 360-min continuous i.v. infusions of 1 to 10 micrograms/kg/min) inhibits platelet aggregation responses to ADP and collagen in canine models. [4] When administered to humans at 0.15 μ g/kg/min for 4 h, Tirofiban produced a 2.5-fold increase in bleeding time and 97% inhibition of ADP-induced platelet aggregation. [5][6]

Solubility Information

Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), H ₂ O: < 1 mg/mL (insoluble or slightly soluble), 1M HCL: 54 mg/mL (122.56 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2696 mL	11.3482 mL	22.6963 mL
5 mM	0.4539 mL	2.2696 mL	4.5393 mL
10 mM	0.227 mL	1.1348 mL	2.2696 mL
50 mM	0.0454 mL	0.227 mL	0.4539 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

- Hartman GD, et al. J Med Chem, 1992, 35(24), 4640-4642.
- Egbertson MS, et al. J Med Chem, 1994, 37(16), 2537-2551.
- Coller BS, et al. J Clin Invest, 1997, 100(11 Suppl), S57-60.
- Lynch JJ Jr, et al. J Pharmacol Exp Ther, 1995, 272(1), 20-32.
- Barrett JS, et al. Clin Pharmacol Ther, 1994, 56(4), 377-388.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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