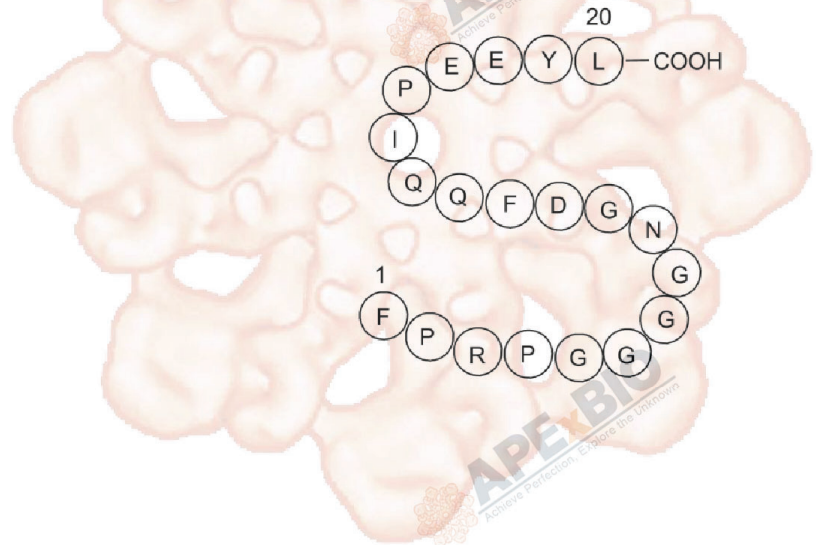


Product Data Sheet

Bivalirudin Trifluoroacetate

Cat. No.:	A3244
CAS No.:	128270-60-0
Formula:	C98H138N24O33
M.Wt:	2180.29
Synonyms:	Bivalirudin
Target:	Proteases
Pathway:	Thrombin
Storage:	Store at -20°C



Solvent & Solubility

≥54.5 mg/mL in DMSO with gentle warming; ≥10.18 mg/mL in EtOH with gentle warming and ultrasonic;
 ≥43.5 mg/mL in H₂O with gentle warming

In Vitro

Preparing Stock Solutions	Solvent Concentration	Mass		
		1mg	5mg	10mg
	1 mM	0.4587 mL	2.2933 mL	4.5865 mL
	5 mM	0.0917 mL	0.4587 mL	0.9173 mL
	10 mM	0.0459 mL	0.2293 mL	0.4587 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary

Reversible thrombin inhibitor

 IC₅₀ & Target

Cell Viability Assay

In Vitro

Preparation method:

This compound is soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months.

Reacting conditions:

1.5 ~ 30 µg/mL

	Applications:	In platelet-poor plasma, Bivalirudin dose-dependently delayed thrombin formation regardless of the activators. Under actin activation, thrombin peak levels decreased progressively (21.5% ± 9.2% at 1.5 µg/mL to 69.9% ± 12.3% at 30 µg/mL). With tissue factor as a trigger, the decrease was more gradual. The peak level of thrombin was only reduced by 29.4% ± 6.2% at 30 µg/mL.
In Vivo	Animal experiment	
	Animal models:	A thromboplastin-induced thrombosis mouse model
	Dosage form:	1 µmol/kg; i.v.
	Applications:	In a thromboplastin-induced lung thrombosis mouse model, Bivalirudin micelles were accumulated in lung thrombi 10-fold more than free Bivalirudin. Moreover, Bivalirudin micelles significantly prolonged the half-life time, increasing the bioavailability of Bivalirudin. In addition, Bivalirudin micelles showed significantly higher anticoagulant activity than free Bivalirudin in both the lung thrombosis model and the ferric chloride-induced carotid artery thrombosis model.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

- [1]. Tanaka KA, Szlam F, Sun HY, Taketomi T, Levy JH. Thrombin generation assay and viscoelastic coagulation monitors demonstrate differences in the mode of thrombin inhibition between unfractionated heparin and bivalirudin. *Anesth Analg*. 2007 Oct;105(4):933-9.
- [2]. She ZG, Liu X, Kotamraju VR, Ruoslahti E. Clot-targeted micellar formulation improves anticoagulation efficacy of bivalirudin. *ACS Nano*. 2014 Oct 28;8(10):10139-49.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for

long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.



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