

## Product Data Sheet

### BIBR 953 (Dabigatran, Pradaxa)

**Cat. No.:** A4077  
**CAS No.:** 211914-51-1  
**Formula:** C<sub>25</sub>H<sub>25</sub>N<sub>7</sub>O<sub>3</sub>  
**M.Wt:** 471.5  
**Synonyms:**  
**Target:** Proteases  
**Pathway:** Thrombin  
**Storage:** Store at -20°C



### Solvent & Solubility

insoluble in DMSO; insoluble in EtOH; insoluble in H<sub>2</sub>O

In Vitro

	Solvent	Mass Concentration			
			1mg	5mg	10mg
Preparing Stock Solutions		1 mM	2.1209 mL	10.6045 mL	21.2089 mL
		5 mM	0.4242 mL	2.1209 mL	4.2418 mL
		10 mM	0.2121 mL	1.0604 mL	2.1209 mL

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

### Biological Activity

Shortsummary

Thrombin inhibitor, potent, reversible and direct

IC<sub>50</sub> & Target

9.3 nM (thrombin)

In Vitro

#### Cell Viability Assay

Preparation method:

The solubility of this compound in DMSO is limited. 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:

0, 40, 110, 180, 250 or 320 ng/mL

Applications:

Without the presence of BIBR 953, neonatal and adult samples showed similar

		results on the time to clot initiation. In neonatal samples, BIBR 953 significantly delay clotting in a dose-dependent manner, with the difference increasing from 3 times for 40 ng/mL BIBR 953 to 9 times for 320 ng/mL BIBR 953.
In Vivo	<b>Animal experiment</b>	
	Animal models:	Rats
	Dosage form:	i.v.
	Applications:	Compared with all of the inhibitors tested, BIBR 953 exhibited the strongest activity and the longest duration of action. Besides, it was well-tolerated in rats up to the highest dose of 10 mg/kg. However, BIBR 953 was not orally active because it was a very polar, a permanently charged molecule with a logP of -2.4 (n-octanol/buffer, pH 7.4).
	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](http://www.apexbt.com).

## References

- [1]. Huel NH, Nar H, Pripke H, Ries U, Stassen JM, Wienen W. Structure-based design of novel potent nonpeptide thrombin inhibitors. J Med Chem. 2002 Apr 25;45(9):1757-66.
- [2]. Nossair FF, Chan HHW, Gantioqui J, Atkinson HM, Berry LR, Chan AKC. In-vitro assessment of the effect of dabigatran on thrombosis of adult and neonatal plasma: comparisons using thromboelastography and microscopic visualization of fibrin clot structure. Blood Coagul Fibrinolysis. 2017 May 12.

## 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. Shortterm 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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## APEx BIO Technology

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