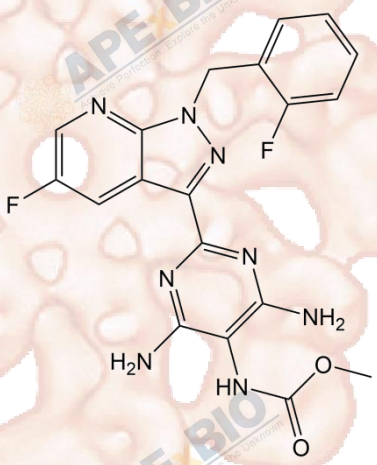
Product Data Sheet

Vericiguat

Cat. No.:	BA5386
CAS No.:	1350653-20-1
Formula:	C19H16F2N8O2
M.Wt:	426.38
Synonyms:	BAY1021189
Target:	Neuroscience
Pathway:	Guanylate cyclase
Storage:	Store at -20° C



Solvent & Solubility

In Vitro

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.3453 mL	11.7266 mL	23.4533 mL
5 mM	0.4691 mL	2.3453 mL	4.6907 mL
10 mM	0.2345 mL	1.1727 mL	2.3453 mL

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

Biological Activity

Shortsummary	
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	Caco-2
Preparation method:	The permeability of vericiguat was determined as previously described for the apical (A) to basal (B) and B-to-A orientation at 2 μM in Caco-2 cells.
Reacting conditions:	2 μM, 60 to 120 minutes at 37 ° C
Applications:	Vericiguat showed a high permeability with Papp values of 111 ± 22 nm/s for

		the A-to-B direction and 464 ± 37 nm/s for the B-to-A direction across Caco-2 cells.
In Vivo	**Animal experiment**	
	Animal models:	L-NAME-treated renin transgenic rats
	Dosage form:	3 mg/kg, 10 mg/kg
	Applications:	Resulted in a significant attenuation of blood pressure increase, however the overall rise of blood pressure increase was not halted in the 3/10 mg/kg treatment groups. Resulted a significant and dose-dependent reduction of heart hypertrophy, in both the right and left ventricle. With respect to kidney damage, Vericiguat Led to a significant reduction in kidney injury molecule Kim-1 and osteopontin expression which are used as biomarkers for renal injury and dysfunction. Resulted in a significant and dose-dependent increase in survival rates. The rat survival rate was 70% and 90%, respectively in the 3 and 10 mg/kg qd treatment groups. In contrast, the survival rate in the placebo group was only 25% after 21 days.
	Preparation method:	Oral administration; 3 mg/kg, 10 mg/kg; once daily; 21 days
	Other notes:	The technical data provided above is for reference only.

Product Citations

See more customer validations on www.apexbt.com.

References

1. Becker, C., Boettcher, M., Muenster, U. et al. Results from in vitro and in vivo studies evaluating the bioavailability, effects of food, and administration as crushed tablet suspension on vericiguat pharmacokinetics. AAPS Open 8, 16 (2022). https://doi.org/10.1186/s41120-022-00063-4.
2. Follmann M, et al. Discovery of the Soluble Guanylate Cyclase Stimulator Vericiguat (BAY 1021189) for the Treatment of Chronic Heart Failure. J Med Chem. 2017 Jun 22;60(12):5146-5161.

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 APExBIO 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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