Rilpivirine

Catalog No.C12587 Batch:C1258703

Product Datasheet

Technical Data

Formula	$C_{22}H_{18}N_6$					
Molecular Weight	366.42	**CAS No.**	500287-72-9			
Solubility (25°C)*	In vitro	DMSO	73 mg/mL (199.22 mM)			
		Water	Insoluble			
		Ethanol	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.
		Injection	Clear solution	5%DMSO [1] → 40%PEG300 [2] → 5%Tween80 [3] → 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	3.650mg/ml (9.96mM)	Taking the 1 mL working solution as an example, add 50 μL of 73 mg/ml clarified DMSO stock solution to 400 μL of PEG300, mix evenly to clarify it; add 50 μL of Tween80 to the above system, mix evenly to clarify; then continue to add 500 μL of ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.
			Clear solution	5% DMSO [1] → 95% Corn oil Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	0.456mg/ml (1.24mM)	Taking the 1 mL working solution as an example, add 50 μL of 9.12 mg/ml clear DMSO stock solution to 950 μL of corn oil and mix evenly. The mixed solution should be used immediately for optimal results.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Concentration \ Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.7291 mL	13.6455 mL	27.2911 mL
5 mM	0.5458 mL	2.7291 mL	5.4582 mL
10 mM	0.2729 mL	1.3646 mL	2.7291 mL
50 mM	0.0546 mL	0.2729 mL	0.5458 mL

Biological Activity

Description	Rilpivirine (R278474, TMC27, DB08864) is a **non-nucleoside reverse transcriptase inhibitor (NNRTI)**, and used to treat HIV-1 infection.
Targets	Reverse transcriptase [1]
In vitro	Rilpivirine shows antiviral activity with EC50 ranging from 0.1 nM to 2 nM against wild-type and selected site-directed single and double mutants of HIV-1. [1] This compound inhibits viral replication at concentrations at which first-generation NNRTIs could not suppress replication, and produces a high genetic barrier to resistance development. [2]
In vivo	After iv administration of Rilpivirine, Elimination half-life ranges from 4.4 h in rat to 31 h in dog. After oral administration of this compound in PEG 400, half-life ranges between 2.8 h in rat and 39 h in dog. [1]
Features	Approved anti-HIV drug with longer half-life and reduced side-effect profile than older NNRTIs.

Protocol (from reference)

Animal Study: [1]

- **Animal Models**
  Sprague−Dawley rat, beagle dog, white New Zealand rabbit, and cynomolgus monkey.
- **Dosages**
  4 mg/kg (rat); 1.25 mg/kg (other species)
- **Administration**
  i.v., p.o.

References

https://pubmed.ncbi.nlm.nih.gov/15771434/ https://pubmed.ncbi.nlm.nih.gov/19933797/

RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

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