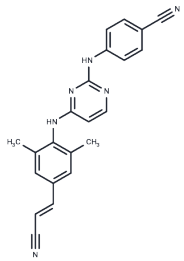
Data Sheet (Cat.No.T2330)

TargetMol

Rilpivirine

Chemical Properties



CAS No. : 500287-72-9

Formula: C22H18N6

Molecular Weight: 366.42

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	Rilpivirine (R278474) is a diarylpyrimidine derivative and reverse transcriptase inhibitor with antiviral activity against HIV-1 that is used in the treatment of HIV infections.
Targets(IC50)	HIV Protease,Reverse Transcriptase
In vitro	Rilpivirine, dissolved in PEG 400 and administered via intravenous injection at dosages of 4 mg/kg in rats and 1.25 mg/kg in dogs, exhibits half-lives of 4.4 hours and 31 hours, respectively.
In vivo	Rilpivirine demonstrates antiviral activity against both wild-type and selective point single and double HIV-1 mutants, with an effective concentration (EC50) ranging from 0.1 to 2 nM.

Solubility Information

Solubility	DMSO: 6.85 mg/mL (18.69 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.5 mg/mL (6.82 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
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

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

Janssen PA, et al. J Med Chem. 2005, 48(6), 1901-1909.
Bao H, Yan J, Huang J, et al.Activation of endogenous retrovirus triggers microglial immuno-inflammation and contributes to negative emotional behaviors in mice with chronic stress.Journal of Neuroinflammation.2023, 20(1): 1-16.
Azijn H, et al. Antimicrob Agents Chemother. 2010, 54(2), 718-727.
Liu K, Hao Z, Zheng H, et al.Repurposing of rilpivirine for preventing platelet β3 integrin-dependent thrombosis by targeting c-Src active autophosphorylation.Thrombosis Research.2023
Fical L. Vývoj UHPLC-MS/MS metody pro analýzu vybraných antivirotik v HILIC a RP módu[J]. 2020
Islam S, Rahaman M H, Yu M, et al.Anti-Leukaemic Activity of Rilpivirine Is Mediated by Aurora A Kinase Inhibition. Cancers.2023, 15(4): 1044.
Fical L, Khalikova M, Kočová Vlčková H, et al. Determination of Antiviral Drugs and Their Metabolites Using Micro-Solid Phase Extraction and UHPLC-MS/MS in Reversed-Phase and Hydrophilic Interaction Chromatography Modes. Molecules. 2021, 26(8): 2123.
Kang D, Pang X, Lian W, et al. Discovery of VEGFR2 inhibitors by integrating naïve Bayesian classification, molecular docking and drug screening approaches[J]. RSC Advances. 2018 Jan 8(10): 5286-5297.
Fical L, Khalikova M, Kočová Vlčková H, et al. Determination of Antiviral Drugs and Their Metabolites Using Micro-Solid Phase Extraction and UHPLC-MS/MS in Reversed-Phase and Hydrophilic Interaction Chromatography Modes [J]. Molecules. 2021, 26(8): 2123.
Kang D, Pang X, Lian W, et al. Discovery of VEGFR2 inhibitors by integrating naïve Bayesian classification, molecular docking and drug screening approaches. RSC Advances. 2018 Jan 8(10): 5286-5297.