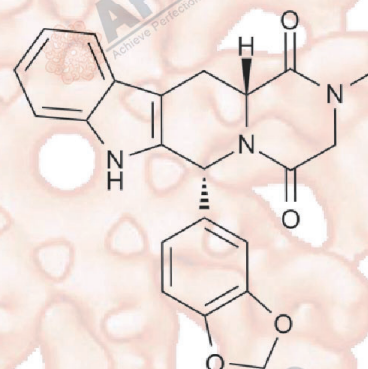


# Product Data Sheet

## Tadalafil

<b>Cat. No.:</b>	A4327
<b>CAS No.:</b>	171596-29-5
<b>Formula:</b>	C <sub>22</sub> H <sub>19</sub> N <sub>3</sub> O <sub>4</sub>
<b>M.Wt:</b>	389.4
<b>Synonyms:</b>	Cialis, ICOS 351, Ic351, IC 351, IC-351
<b>Target:</b>	Metabolism
<b>Pathway:</b>	PDE
<b>Storage:</b>	Store at -20°C



## Solvent & Solubility

insoluble in H<sub>2</sub>O; insoluble in EtOH; ≥16.6 mg/mL in DMSO

In Vitro

	Solvent	Mass Concentration	1mg	5mg	10mg
Preparing Stock Solutions		1 mM	2.5681 mL	12.8403 mL	25.6805 mL
		5 mM	0.5136 mL	2.5681 mL	5.1361 mL
		10 mM	0.2568 mL	1.2840 mL	2.5681 mL

Please refer to the solubility information to select the appropriate solvent

## Biological Activity

Shortsummary

PDE5 inhibitor

IC<sub>50</sub> & Target

In Vitro

### Cell Viability Assay

Cell Line: human hepatocytes

Preparation method: The solubility of this compound in DMSO is >16.6mg/mL. 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 μM

In Vivo	Applications:	Tadalafil (1 $\mu$ M) increased CYP3A protein expression in human hepatocytes.
	<b>Animal experiment</b>	
	Animal models:	Rat model with bilateral cavernous neurotomy (BCN)-induced penile damage and hypo-oxygenation, Mice with cavernous nerve resection
	Dosage form:	2 mg/kg, daily for 3 months
	Applications:	Tadalafil (2 mg/kg) almost completely restored penile oxygenation and abolished neurotomy induced increase and substantially rescued muscle/fiber ratio in penile sections in sham-operated rats. Tadalafil decreased the number of apoptotic cells and increased the phosphorylation of the 2 survival associated kinases Akt and extracellular signal-regulated kinase 1/2 in mice.
	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]. Ring B J, Patterson B E, Mitchell M I, et al. Effect of tadalafil on cytochrome P450 3A4-mediated clearance: studies in vitro and in vivo[J]. Clinical Pharmacology & Therapeutics, 2005, 77(1): 63-75.
- [2]. Morelli A, Vignozzi V, Filippi S, et al. Effect of Chronic Tadalafil Administration on Penile Hypoxia Induced by Cavernous Neurotomy in the Rat[J]. The Journal of Sexual Medicine, 2006, 3: 46.
- [3]. Lysiak J J, Yang S K, Klausner A P, et al. Tadalafil increases Akt and extracellular signal-regulated kinase 1/2 activation, and prevents apoptotic cell death in the penis following denervation[J]. The Journal of urology, 2008, 179(2): 779-785.

## 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.



## APExBIO Technology

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