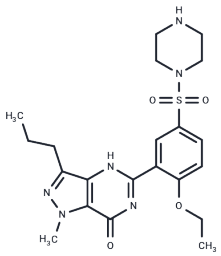
Data Sheet (Cat.No.T36061)

TargetMol

N-Desmethyl Sildenafil

Chemical Properties



CAS No. : 139755-82-1

Formula: C21H28N6O4S

Molecular Weight: 460.55

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	N-Desmethyl Sildenafil is the major metabolite of Sildenafil, a potent phosphodiesterase type 5 (PDE5) inhibitor.
Targets(IC50)	Drug Metabolite,PDE
In vitro	N-Desmethyl Sildenafil enhances the amplitude of electroretinogram (ERG) signals from dark-adapted isolated rat retinas, likely by improving photoreceptor cell responses[1]. This compound's formation is investigated through the use of CYP3A supersomes that co-express human P450 oxidoreductase and cytochrome b5, with its synthesis being predominantly catalyzed by CYP3A4 and CYP3A5 enzymes, and to a smaller degree by CYP3A7[2].

Solubility Information

Solubility	DMF: 5 mg/mL (10.86 mM),Sonication is recommended. DMSO:PBS (pH 7.2)(1:5): 0.15 mg/mL (0.33 mM),Sonication is recommended. DMSO: 225 mg/mL (488.55 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (10.86 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	2.1713 mL	10.8566 mL	21.7132 mL
5 mM	0.4343 mL	2.1713 mL	4.3426 mL
10 mM	0.2171 mL	1.0857 mL	2.1713 mL
50 mM	0.0434 mL	0.2171 mL	0.4343 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

Péter Barabás, et al. Sildenafil, N-desmethyl-sildenafil and Zaprinast enhance photoreceptor response in the isolated rat retina. Neurochem Int. 2003 Nov;43(6):591-5.
Rikako Takahiro, et al. Contribution of CYP3A isoforms to dealkylation of PDE5 inhibitors: a comparison between sildenafil N-demethylation and tadalafil demethylenation. Biol Pharm Bull. 2015;38(1):58-65.