

Sildenafil

Catalog No: tcsc1577



Available Sizes

Size: 50mg

Size: 100mg

Size: 200mg



Specifications

CAS No:

139755-83-2

Formula:

$C_{22}H_{30}N_6O_4S$

Pathway:

Metabolic Enzyme/Protease;Autophagy

Target:

Phosphodiesterase (PDE);Autophagy

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 29 mg/mL (61.11 mM)

Alternative Names:

UK-92480

Observed Molecular Weight:

474.58

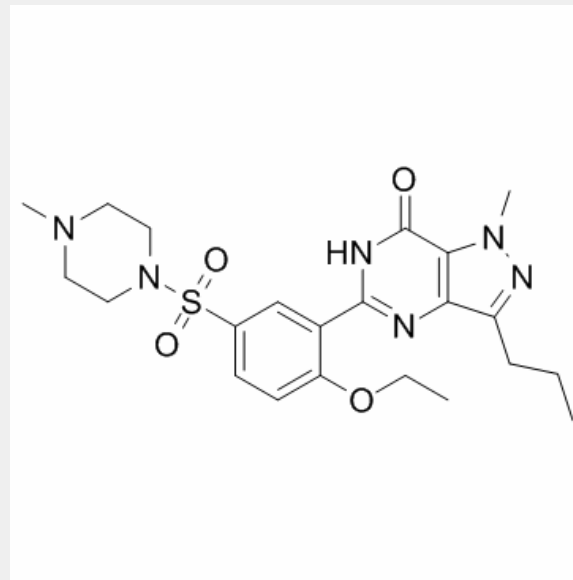
Product Description

Sildenafil is a potent phosphodiesterase type 5 (**PDE5**) inhibitor with **IC₅₀** of 5.22 nM.

IC50 & Target: IC50: 5.22 nM (PDE 5)^[1]

In Vitro: Pretreatment with 1 μ M Sildenafil potentiates the phosphorylation of ERK1/ERK2, an increase in the percentage of cells in S phase and cell proliferation, compared with serotonin stimulation alone (P[2]).

In Vivo: In the dog model of erection, Sildenafil citrate significantly increases ICP and ICP/BP but shows no significant effect on BP compared with vehicle^[1]. Sildenafil treatment significantly decreases the number of TL⁺-cells at 10 but not 0.5 mg/kg. At this time point, cells positive for the M1-like marker COX-2⁺ are found in the ischemic core in PBS-treated animals, whereas they are mostly observed in the penumbra in 10 mg/kg (but not 0.5 mg/kg) Sildenafil-treated animals. In contrast, 8 days after pMCAo the number of microglia/macrophages stained by Iba-1 are significantly reduced by Sildenafil treatment (0.5 and/or 10 mg/kg dose)^[3]. Sildenafil citrate has been reported to decrease flap necrosis in preclinical animal models by increasing the secretion of growth factors (FGF and VEGF), and histologically is shown to be effective in rat cavernous nerve architecture^[4].



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