



Sildenafil Citrate

Data Sheet

Catalog Number:	MC11052	Product Type:	Small Molecule
Bio-Activity:	PDE5 inhibitor	CAS #:	171599-83-0
Research Categories:	Neuroscience, hypertension, neurodegeneration	Chemical Name:	1-[[3-(4,7-Dihydro-1-methyl-7-oxo-3-propyl-1H-pyrazolo[4,3-d]pyrimidin-5-yl)-4-ethoxyphenyl]sulfonyl]-4-methylpiperazine citrate
Solubility:	Soluble in DMSO (up to 60 mg/ml).	Molecular Formula:	C22H30N6O4S C6H8O7
Purity:	> 98%	Molecular Weight:	666.7
Format:	Powder	Ship Temp:	Ambient
Storage:	Room Temperature		

Application Notes

Description/Data:

Potent and selective phosphodiesterase (PDE5) inhibitor, IC₅₀=4 nM [1-3]. Clinically useful agent for male erectile dysfunction [4] and pulmonary hypertension [5].

References:

- 1) Terrett et al. (1996), sildenafil (VIAGRATM), a potent and selective inhibitor of type 5 cGMP phosphodiesterase with utility for the treatment of male erectile dysfunction; Bioorg. Med. Chem. Lett., 6 1819
- 2) Ballard et al. (1998), Effects of sildenafil on the relaxation of human corpus cavernosum tissue in vitro and on the activities of cyclic nucleotide phosphodiesterase isozymes; J. Urol., 159 2164
- 3) Turko et al. (1999), Inhibition of cyclic GMP-binding cyclic GMP-specific phosphodiesterase (Type 5) by sildenafil and related compounds; Mol. Pharmacol., 56 124
- 4) Teixeira et al. (2006), differential effects of the phosphodiesterase type 5 inhibitors sildenafil, vardenafil, and tadalafil in rat aorta; J. Pharmacol. Exp. Therap., 316 654
- 5) Ghofrani et al. (2006), Sildenafil: from angina to erectile dysfunction to pulmonary hypertension and beyond; Nat. Rev. Drug Discov., 5 689

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