



# Sildenafil Citrate

# Data Sheet

<b>Catalog Number:</b>	MC11052	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	PDE5 inhibitor	<b>CAS #:</b>	171599-83-0
<b>Research Categories:</b>	Neuroscience, hypertension, neurodegeneration	<b>Chemical Name:</b>	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
<b>Solubility:</b>	Soluble in DMSO (up to 60 mg/ml).	<b>Molecular Formula:</b>	C <sub>22</sub> H <sub>30</sub> N <sub>6</sub> O <sub>4</sub> S C <sub>6</sub> H <sub>8</sub> O <sub>7</sub>
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	666.7
<b>Format:</b>	Powder	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	Room Temperature		

## Application Notes

### Description/Data:

Potent and selective phosphodiesterase (PDE5) inhibitor, IC<sub>50</sub>=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

**FOR RESEARCH USE ONLY**

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012

[www.neuromics.com](http://www.neuromics.com)

Neuromics Antibodies • 5325 West 74<sup>th</sup> Street, Suite 8 • Edina, MN 55439  
phone 866-350-1500 • fax 612-677-3976 • e-mail: [pshuster@neuromics.com](mailto:pshuster@neuromics.com)