

# PRODUCT INFORMATION



## N-desmethyl Sildenafil

Item No. 18208

**CAS Registry No.:** 139755-82-1  
**Formal Name:** 5-[2-ethoxy-5-(1-piperazinylsulfonyl)phenyl]-1,6-dihydro-1-methyl-3-propyl-7H-pyrazolo[4,3-d]pyrimidin-7-one

**Synonym:** UK-103320

**MF:** C<sub>21</sub>H<sub>28</sub>N<sub>6</sub>O<sub>4</sub>S

**FW:** 460.6

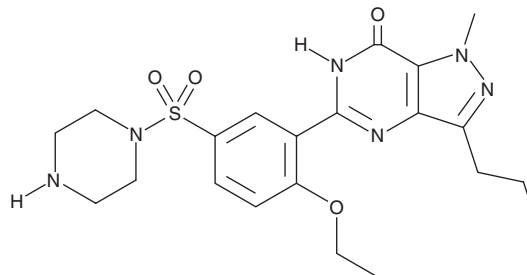
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 212, 293 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

N-desmethyl Sildenafil is supplied as a crystalline solid. A stock solution may be made by dissolving the N-desmethyl sildenafil in the solvent of choice. N-desmethyl Sildenafil is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of N-desmethyl sildenafil in these solvents is approximately 10 and 5 mg/ml, respectively.

N-desmethyl Sildenafil is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N-desmethyl sildenafil should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. N-desmethyl Sildenafil has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

N-desmethyl Sildenafil is a major metabolite of sildenafil (Item Nos. 10008671 | 14008),<sup>1-3</sup> N-desmethyl Sildenafil is formed *via* oxidative metabolism of sildenafil by the cytochrome (CYP) P450 isoforms CYP3A4, CYP3A5, and CYP3A7.<sup>3</sup>

### References

1. Walker, D.K., Ackland, M.J., James, G.C., *et al.* Pharmacokinetics and metabolism of sildenafil in mouse, rat, rabbit, dog and man. *Xenobiotica* **29**(3), 297-310 (2015).
2. Muirhead, G.J., Wilner, K., Colburn, W., *et al.* The effects of age and renal and hepatic impairment on the pharmacokinetics of sildenafil citrate. *Br. J. Clin. Pharmacol.* **53**, 21S-30S (2015).
3. Takahiro, R., Nakamura, S., Kohno, H., *et al.* Contribution of CYP3A isoforms to dealkylation of PDE5 inhibitors: A comparison between sildenafil N-demethylation and tadalafil demethylation. *Biol. Pharm. Bull.* **38**(1), 58-65 (2015).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM