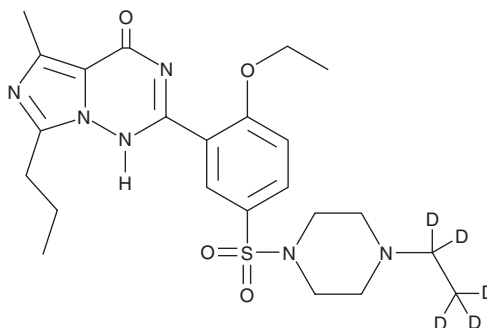


# PRODUCT INFORMATION



## Vardenafil-d<sub>5</sub> Item No. 25225

**CAS Registry No.:** 1189685-70-8  
**Formal Name:** 2-(2-ethoxy-5-((4-(ethyl-d<sub>5</sub>)piperazin-1-yl)sulfonyl)phenyl)-5-methyl-7-propyl-3H-imidazo[5,1-f][1,2,4]triazin-4-one  
**MF:** C<sub>23</sub>H<sub>27</sub>D<sub>5</sub>N<sub>6</sub>O<sub>4</sub>S  
**FW:** 493.6  
**Chemical Purity:** ≥98% (Vardenafil)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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

Vardenafil-d<sub>5</sub> is intended for use as an internal standard for the quantification of vardenafil (Item No. 14930) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Vardenafil-d<sub>5</sub> is supplied as a solid. A stock solution may be made by dissolving the vardenafil-d<sub>5</sub> in water. The solubility of vardenafil-d<sub>5</sub> in water is approximately 0.11 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Vardenafil is a potent inhibitor of phosphodiesterase 5 (PDE5; IC<sub>50</sub>s = 0.2-1.2 nM) and PDE6 (IC<sub>50</sub> = 2 nM).<sup>1-3</sup> It is selective for PDE5 and PDE6 over PDE1 and PDE11 (IC<sub>50</sub>s = 230 and 130 nM, respectively). Vardenafil (4 mg/kg per day for three weeks) improves erectile function in a rat model of acute arteriogenic erectile dysfunction by increasing intracavernous pressure and mean arterial pressure, and this effect persists for at least two weeks following the end of treatment.<sup>4</sup> Chronic vardenafil administration at a dose of 2 mg/kg for five weeks to subordinate mice reduces the latency to mount and increases the frequency of mounting behavior.<sup>5</sup> Formulations containing vardenafil have been used in the treatment of erectile dysfunction.

### References

1. Card, G.L., England, B.P., Suzuki, Y., *et al.* *Structure* **12**(12), 2233-2247 (2004).
2. Boyle, C.D., Xu, R., Asberom, T., *et al.* *Bioorg. Med. Chem. Lett.* **15**(9), 2365-2369 (2005).
3. Smith, W.B., II, McCaslin, I.R., Gokce, A., *et al.* *Int. J. Clin. Pract.* **67**(8), 768-780 (2013).
4. Hotta, Y., Ohno, R., Kataoka, T., *et al.* *J. Sex Med.* **9**(7), 1782-1788 (2012).
5. Dadomo, H., Parmigiani, S., Nicolini, Y., *et al.* *Behav. Brain Res.* **253**, 103-112 (2013).

#### 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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