



## Product Information

Product ID V0269

CAS No. 224789-15-5

Chemical Name

Synonym

Formula  $C_{23}H_{32}N_6O_4S \cdot 2HCl$

Formula Wt. 561.52

Melting Point

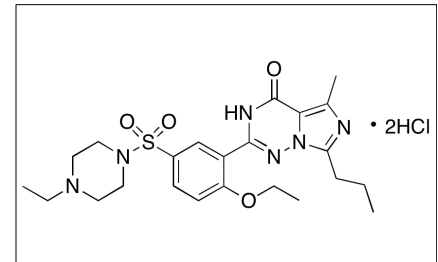
Purity  $\geq 98\%$

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** Vardenafil is a centrally-acting phosphodiesterase 5 (PDE5) inhibitor that is clinically used to treat erectile dysfunction. Vardenafil also exhibits antioxidative and antihypertensive activities and shows some potential for synergistic chemotherapeutic ability through its modulation of cGMP-NO signaling. This compound increases expression of NO and eNOS as well as activity of superoxide dismutase, decreasing oxidative stress, pulmonary vascular resistance, and right ventricular hypertrophy and increasing cardiac output in animal models of pulmonary arterial hypertension (PAH). Vardenafil decreases proteinuria and glomerular damage in animal models of diabetic nephropathy-induced cGMP pathway dysfunction. In cellular models, vardenafil decreases secretion of IL-8 and expression of oxidative LDLR (LOX-1), suggesting potential benefit in the treatment of benign prostatic hyperplasia/low urinary tract syndrome (BPH/LUTS).



**Bulk quantities available upon request**

Product ID	Size
V0269	10 mg
V0269	25 mg
V0269	100 mg

**References** Vignozzi L, Gacci M, Cellai I, et al. PDE5 inhibitors blunt inflammation in human BPH: a potential mechanism of action for PDE5 inhibitors in LUTS. Prostate. 2013 Sep;73(13):1391-402. PMID: 23765639.

Fan YF, Zhang R, Jiang X, et al. The phosphodiesterase-5 inhibitor vardenafil reduces oxidative stress while reversing pulmonary arterial hypertension. Cardiovasc Res. 2013 Aug 1;99(3):395-403. PMID: 23650288.

Fang L, Radovits T, Szabó G, et al. Selective phosphodiesterase-5 (PDE-5) inhibitor vardenafil ameliorates renal damage in type 1 diabetic rats by restoring cyclic 3',5' guanosine monophosphate (cGMP) level in podocytes. Nephrol Dial Transplant. 2013 Jul;28(7):1751-61. PMID: 23203993

Zhu B, Strada SJ. The novel functions of cGMP-specific phosphodiesterase 5 and its inhibitors in carcinoma cells and pulmonary/cardiovascular vessels. Curr Top Med Chem. 2007;7(4):437-54. PMID: 17305584.

Lau LC, Adaikan PG. Mechanisms of direct relaxant effect of sildenafil, tadalafil and vardenafil on corpus cavernosum. Eur J Pharmacol. 2006 Jul 17;541(3):184-90. PMID: 16777087.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.