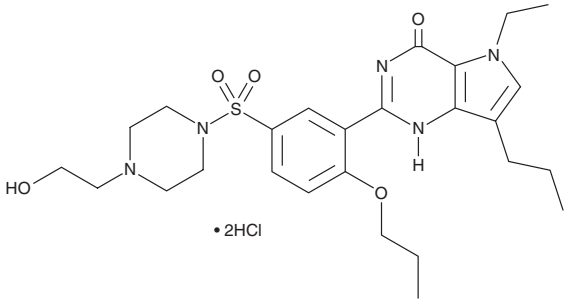
PRODUCT INFORMATION

Mirodenafil (hydrochloride)

Item No. 29045

CAS Registry No.:	862189-96-6
Formal Name:	5-ethyl-3,5-dihydro-2-[5-[[4-(2-hydroxyethyl)-1-piperazinyl]sulfonyl]-2-propoxyphenyl]-7-propyl-4H-pyrrolo[3,2-d]pyrimidin-4-one, dihydrochloride
Synonym:	SK3530
MF:	$C_{26}H_{37}N_5O_5S \bullet 2HCl$
FW:	604.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 211, 250 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

Mirodenafil (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the mirodenafil (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Mirodenafil (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of mirodenafil (hydrochloride) in ethanol is approximately 10 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Mirodenafil (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, mirodenafil (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Mirodenafil (hydrochloride) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Mirodenafil is a phosphodiesterase 5 (PDE5) inhibitor.[1] It increases penile intracavernosal pressure (ICP) in a rat model of diabetes induced by streptozotocin (STZ; Item No. 13104) and in a rat model of cavernosal nerve injury when administered at doses of 1 and 10 mg/kg, respectively.[1,2] Mirodenafil (4 mg/kg per day) decreases bladder wall submucosal fibrosis and degeneration in a rat model of chronic bladder ischemia.[3] It also decreases bladder overactivity in a female rat model of partial bladder outlet obstruction.[4]

References

1. Park, K., Cho, S.Y., and Kim, S.W. Erectile response to type 5 phosphodiesterase inhibitor could be preserved with the addition of simvastatin to conventional insulin treatment in rat model of diabetes. *Int. J. Androl.* **34(5 Pt 2)**, e468-e474 (2011).
2. Kim, H., Sohn, D.W., Kim, S.D., *et al.* The effect of mirodenafil on the penile erection and corpus cavernosum in the rat model of cavernosal nerve injury. *Int. J. Impot. Res.* **22(5)**, 291-297 (2010).
3. Choi, H., Bae, J.H., Shim, J.S., *et al.* Mirodenafil prevents bladder dysfunction induced by chronic bladder ischemia in rats. *Int. Neurourol. J.* **19(1)**, 19-26 (2015).
4. Kang, J.Y., Kim, E.K., and Kim, K.M. Effects of mirodenafil, a phosphodiesterase-5 inhibitor, on female rat bladder in a partial bladder outlet obstruction model: Physiological and immunohistochemical aspects. *Korean J. Urol.* **54(5)**, 339-344 (2013).

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