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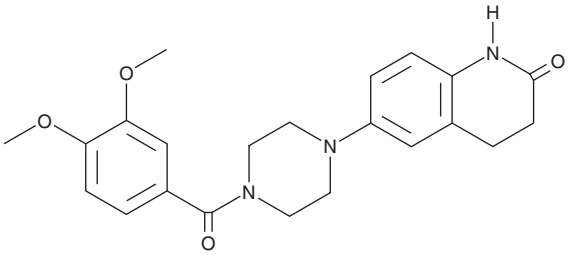
PRODUCT INFORMATION

Vesnarinone

Item No. 23489

CAS Registry No.:	81840-15-5
Formal Name:	6-[4-(3,4-dimethoxybenzoyl)-1-piperazinyl]-3,4-dihydro-2(1H)-quinolinone
Synonym:	OPC 8212
MF:	$C_{22}H_{25}N_3O_4$
FW:	395.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 272 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Vesnarinone is supplied as a crystalline solid. A stock solution may be made by dissolving the vesnarinone in the solvent of choice. Vesnarinone is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of vesnarinone in these solvents is approximately 3 mg/ml.

Vesnarinone is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, vesnarinone should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Vesnarinone has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Vesnarinone is an inhibitor of phosphodiesterase 3 (PDE3; IC_{50}s = 10.7 and 13.2 µM for PDE3A and PDE3B, respectively).[1] It also inhibits ether-a-go-go-related gene 1 (ERG1) channels (IC_{50} = 1.1 µM in HEK293T cells expressing human ERG1).[2] Vesnarinone (3-300 µM) increases contractile tension in isolated ventricular muscles of dog, cat, rabbit, and guinea pig in a dose-dependent manner.[3] Oral and i.v. administration of vesnarinone increases right ventricular pressure with no effect on heart rate in dog models of tricuspid insufficiency- and pulmonary stenosis-induced congestive heart failure. It also increases contractility and coronary flow while decreasing heart rate in a guinea pig model of aortic stenosis-induced congestive heart failure. Formulations containing vesnarinone have been used for the treatment of congestive heart failure.[4]

References

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2. Katayama, Y., Fujita, A., Ohe, T., *et al.* Inhibitory effects of vesnarinone on cloned cardiac delayed rectifier K^+ channels expressed in a mammalian cell line. *J. Pharmacol. Exp. Ther.* **294(1)**, 339-346 (2000).
3. Feldman, A.M. Pharmacologic properties and clinical evaluation of the new inotropic agent OPC-8212 (vesnarinone). *Cardiovasc. Drug Rev.* **11(1)**, 1-11 (1993).
4. Reis, S.E., Holubkov, R., Young, J.B., *et al.* Estrogen is associated with improved survival in aging women with congestive heart failure: Analysis of the vesnarinone studies. *J. Am. Coll. Cardiol.* **36(2)**, 529-533 (2000).

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