

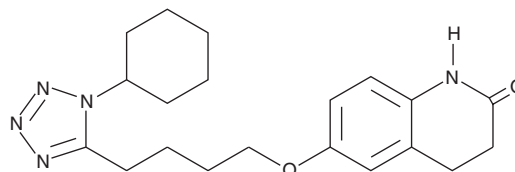
# PRODUCT INFORMATION



## Cilostazol

Item No. 15035

**CAS Registry No.:** 73963-72-1  
**Formal Name:** 6-[4-(1-cyclohexyl-1H-tetrazol-5-yl)butoxy]-3,4-dihydro-2(1H)-quinolinone  
**Synonyms:** OPC 13013, OPC 21, Pletaal, Pletal  
**MF:** C<sub>20</sub>H<sub>27</sub>N<sub>5</sub>O<sub>2</sub>  
**FW:** 369.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 257 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

Cilostazol is supplied as a crystalline solid. A stock solution may be made by dissolving the cilostazol in the solvent of choice, which should be purged with an inert gas. Cilostazol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of cilostazol in ethanol is approximately 0.11 mg/ml and approximately 12.5 mg/ml in DMSO and DMF.

Cilostazol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cilostazol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Cilostazol has a solubility of approximately 0.13 mg/ml in a 1:7 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Cilostazol is a phosphodiesterase 3A (PDE3A) inhibitor (IC<sub>50</sub> = 0.2 μM for the platelet enzyme).<sup>1</sup> It is selective for PDE3A over PDE1, -2, -4, and 5 (IC<sub>50</sub>s = >5 μM for all). Cilostazol inhibits collagen- or ADP-induced aggregation of isolated rabbit platelets (IC<sub>50</sub>s = 29 and 31 μM, respectively).<sup>2</sup> *In vivo*, cilostazol (30 mg/kg) reduces thrombus formation by 84% in a mouse model of pulmonary thromboembolism. It reduces cardiac fibrosis and prevents the development of diastolic dysfunction and cardiac hypertrophy induced by a high-fat diet and angiotensin II in mice.<sup>3</sup> Formulations containing cilostazol have been used in the treatment of the symptoms of intermittent claudication in peripheral vascular disease.

### References

1. Schrör, K. The pharmacology of cilostazol. *Diabetes Obes. Metab.* **4 (Suppl 2)**, S14-S19 (2002).
2. Koga, Y., Kihara, Y., Okada, M., *et al.* 2(1H)-Quinolinone derivatives as novel anti-arteriostenotic agents showing anti-thrombotic and anti-hyperplastic activities. *Bioorg. Med. Chem. Lett.* **8(12)**, 1471-1476 (1998).
3. Reddy, S.S., Agarwal, H., and Barthwal, M.K. Cilostazol ameliorates heart failure with preserved ejection fraction and diastolic dysfunction in obese and non-obese hypertensive mice. *J. Mol. Cell. Cardiol.* **123**, 46-57 (2018).

#### 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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