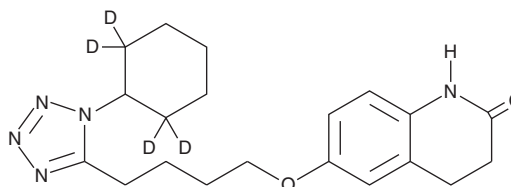


PRODUCT INFORMATION



Cilostazol-d₄ Item No. 31790

CAS Registry No.: 1215541-47-1
Formal Name: 6-(4-(1-(cyclohexyl-2,2,6,6-d₄)-1H-tetrazol-5-yl)butoxy)-3,4-dihydroquinolin-2(1H)-one
MF: C₂₀H₂₃D₄N₅O₂
FW: 373.5
Chemical Purity: ≥98% (Cilostazol)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
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

Cilostazol-d₄ is intended for use as an internal standard for the quantification of cilostazol (Item No. 15035) 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).

Cilostazol-d₄ is supplied as a solid. A stock solution may be made by dissolving the cilostazol-d₄ in the solvent of choice, which should be purged with an inert gas. Cilostazol-d₄ is slightly soluble in DMSO and methanol.

Description

Cilostazol is a phosphodiesterase 3A (PDE3A) inhibitor (IC₅₀ = 0.2 μM for the platelet enzyme).¹ It is selective for PDE3A over PDE1, -2, -4, and 5 (IC₅₀s = >5 μM for all). Cilostazol inhibits collagen- or ADP-induced aggregation of isolated rabbit platelets (IC₅₀s = 29 and 31 μM, respectively).² *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.³ 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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