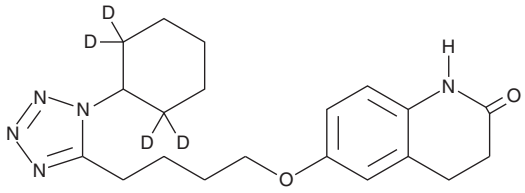
PRODUCT INFORMATION

Cilostazol-d_4

Item No. 31790

CAS Registry No.: 1215541-47-1
Formal Name: 6-(4-(1-(cyclohexyl-2,2,6,6-d_4)-1H-tetrazol-5-yl)butoxy)-3,4-dihydroquinolin-2(1H)-one
MF: $C_{20}H_{23}D_4N_5O_2$
FW: 373.5
Chemical Purity: ≥98% (Cilostazol)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
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-d_4 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-d_4 is supplied as a solid. A stock solution may be made by dissolving the cilostazol-d_4 in the solvent of choice, which should be purged with an inert gas. Cilostazol-d_4 is slightly soluble in DMSO and methanol.

Description

Cilostazol is a phosphodiesterase 3A (PDE3A) inhibitor (IC_{50} = 0.2 µM for the platelet enzyme).[1] It is selective for PDE3A over PDE1, -2, -4, and 5 (IC_{50}s = >5 µM for all). Cilostazol inhibits collagen- or ADP-induced aggregation of isolated rabbit platelets (IC_{50}s = 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM