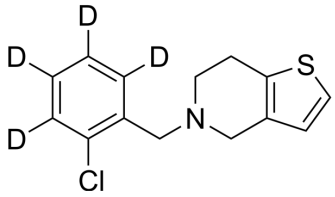
Ticlopidine-d_4

Cat. No.:	HY-100386S
CAS No.:	1246817-49-1
Molecular Formula:	$C_{14}H_{10}D_4ClNS$
Molecular Weight:	267.81
Target:	Cytochrome P450; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ticlopidine-d4 is the deuterium labeled Ticlopidine. Ticlopidine (PCR 5332), an antithrombotic proagent, acts as an allosteric, noncompetitive inhibitor of CD39 with the IC50 of 81.7 μM. Ticlopidine blocks several NTPDase isoenzymes with IC50s of 170 μM and 149 μM for NTPDase2 and NTPDase3, respectively[1]. Ticlopidine is an inhibitor of CYP2C19 human liver cytochrome. Ticlopidine inhibits CYP2C9 and CYP3A4 with IC50s of 26.0 and 32.3 μM, respectively[2][3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Laura Schäkel, et al. 2-Substituted thienotetrahydropyridine derivatives: Allosteric ectonucleotidase inhibitors. Arch Pharm (Weinheim). 2021 Dec;354(12):e2100300.

[3]. I.KRASLOVA1, et al. Ticlopidine-Induced Cholestatic Inflammatory Hepatitis: New Insights into Pathogenetic Mechanisms of Drug-Related Hepatotoxicity.

[4]. Si-hyung Yang, et al. Effects of ticlopidine on pharmacokinetics of losartan and its main metabolite EXP-3174 in rats. Acta Pharmacol Sin. 2011 Jul;32(7):967-72.

[5]. F Piovella, et al. The effect of Ticlopidine on human endothelial cells in culture. Thromb Res. 1984 Feb 1;33(3):323-32.

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