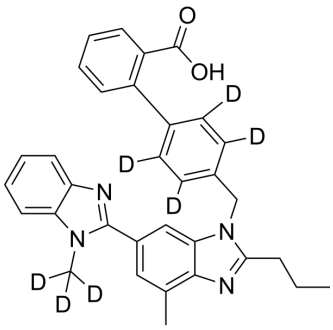
Telmisartan-d_7

Cat. No.:	HY-13955S3
CAS No.:	1794754-60-1
Molecular Formula:	$C_{33}H_{23}D_7N_4O_2$
Molecular Weight:	521.66
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Telmisartan-d_7 (BIBR 277-d_7) is a deuterium labeled Telmisartan (HY-13955). Telmisartan is a potent, long lasting antagonist of angiotensin II type 1 receptor (AT1), selectively inhibiting the binding of ^{125}I-AngII to AT1 receptors with IC_{50} of 9.2 nM.
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 Feb;53(2):211-246.

[2]. Maillard MP, et al. In vitro and in vivo characterization of the activity of telmisartan: an insurmountable angiotensin II receptor antagonist. J Pharmacol Exp Ther. 2002 Sep;302(3):1089-95.

[3]. Xuan H, et al. Inhibition or deletion of angiotensin II type 1 receptor suppresses elastase-induced experimental abdominal aortic aneurysms. J Vasc Surg. 2017 Apr 20. pii: S0741-5214(17)30100-3.

[4]. Torika N, et al. Intranasal telmisartan ameliorates brain pathology in five familial Alzheimer's disease mice. Brain Behav Immun. 2017 Apr 3.

[5]. Aswar U, et al. Telmisartan attenuates diabetes induced depression in rats. Pharmacol Rep. 2017 Apr;69(2):358-364.

[6]. Fujihara S, et al. The angiotensin II type 1 receptor antagonist telmisartan inhibits cell proliferation and tumor growth of esophageal adenocarcinoma via the AMPKα/mTOR pathway in vitro and in vivo. Oncotarget. 2017 Jan 31;8(5):8536-8549.

Caution: Product has not been fully validated for medical applications. For research use only.

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