## Azilsartan-d<sub>4</sub>

Cat. No.:	HY-14914S1
CAS No.:	1794817-45-0 O O N
Molecular Formula:	$C_{25}H_{16}D_4N_4O_5$
Molecular Weight:	460.47 HO_O
Target:	Apoptosis; Angiotensin Receptor; Reactive Oxygen Species
Pathway:	Apoptosis; GPCR/G Protein; Immunology/Inflammation; Metabolic Enzyme/Protease; N D O D NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY	
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Description	Azilsartan-d <sub>4</sub> is the deuterium labeled Azilsartan[1]. Azilsartan is an orally active, potent, selective and specific angiotensin II type 1 receptor (AT1) antagonist. Azilsartan induces ROS formation and apoptosis in HepG2 cells. Azilsartan shows neuroprotective and anticancer activity. Azilsartan can be used for hypertension and stroke research[2][3][4][5][6].
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 <sup>[1]</sup> . 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):211-216.

[2]. Kajiya T, et al. Molecular and cellular effects of azilsartan: a new generation angiotensin II receptor blocker. J Hypertens. 2011 Dec;29(12):2476-83.

[3]. Zhao M, et al. Azilsartan treatment improves insulin sensitivity in obese spontaneously hypertensive Koletsky rats. Diabetes Obes Metab. 2011 Dec;13(12):1123-9.

[4]. Ojima M, et al. In vitro antagonistic properties of a new angiotensin type 1 receptor blocker, azilsartan, in receptor binding and function studies. J Pharmacol Exp Ther. 2011 Mar;336(3):801-8.

[5]. Gupta V, et al. Neuroprotective potential of azilsartan against cerebral ischemic injury: Possible involvement of mitochondrial mechanisms. Neurochem Int. 2020 Jan;132:104604.

[6]. Ahmadian E, et al. Novel angiotensin receptor blocker, azilsartan induces oxidative stress and NFkB-mediated apoptosis in hepatocellular carcinoma cell line HepG2. Biomed Pharmacother. 2018 Mar;99:939-946.

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

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## Product Data Sheet

