## **Product** Data Sheet

## Aldosterone-d<sub>7</sub>

Cat. No.: HY-113313S1

Molecular Formula:  $C_{21}H_{21}D_7O_5$ Molecular Weight: 367.49

Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

Storage: Powder -20°C 3 years

In solvent -80°C 6 months -20°C 1 month

## **BIOLOGICAL ACTIVITY**

Description	Aldosterone-d <sub>7</sub> is the deuterium labeled Aldosterone. Aldosterone is the primary mineralocorticoid. Aldosterone is a steroid hormone, and it is synthesized and secreted in response to renin-angiotensin system activation (RAS) or high dietary potassium by the zona glomerulosa (ZG) of the adrenal cortex. Aldosterone activity is dependent by the binding and activation of the cytoplasmic/nuclear mineralocorticoid receptor (MR) at cellular level[1][2].
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;53(2):211-216.

[2]. Nanba K, et al. Aging and Adrenal Aldosterone Production. Hypertension. 2018 Feb;71(2):218-223.

[3]. Cannavo A, et al. Aldosterone and Mineralocorticoid Receptor System in Cardiovascular Physiology and Pathophysiology. Oxid Med Cell Longev. 2018 Sep 19;2018:1204598.

[4]. Ikeda U, et al. Aldosterone inhibits nitric oxide synthesis in rat vascular smooth muscle cells induced by interleukin-1 beta. Eur J Pharmacol. 1995 Jul 18;290(2):69-73.

[5]. Martín-Fernández B, et al. Beneficial effects of proanthocyanidins in the cardiac alterations induced by aldosterone in ratheart through mineralocorticoid receptor blockade. PLoS One. 2014 Oct 29;9(10):e111104.

[6]. Dinh QN, et al. Aldosterone-induced oxidative stress and inflammation in the brain are mediated by the endothelial cell mineralocorticoid receptor. Brain Res. 2016 Apr 15;1637:146-153.

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

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