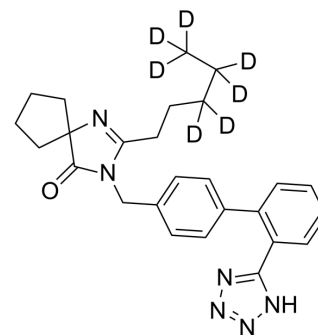


## Irbesartan-d<sub>7</sub>

<b>Cat. No.:</b>	HY-B0202S3
<b>Molecular Formula:</b>	C <sub>26</sub> H <sub>23</sub> D <sub>7</sub> N <sub>6</sub> O
<b>Molecular Weight:</b>	449.6
<b>Target:</b>	Apoptosis; Angiotensin Receptor; Isotope-Labeled Compounds
<b>Pathway:</b>	Apoptosis; GPCR/G Protein; Others
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Irbesartan-d <sub>7</sub> is deuterated labeled Irbesartan (HY-B0202). Irbesartan (SR-47436) is an orally active Ang II type 1 (AT1) receptor blocker (ARB). Irbesartan can relax the blood vessels, low blood pressure and increase the supply of blood and oxygen to the heart. Irbesartan can be used for the research of high blood pressure, heart failure, and diabetic kidney disease <sup>[1]</sup> .
<b>In Vitro</b>	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> . Irbesartan (20 μM, 3 h) reduces Th22 cells chemotaxis in vitro <sup>[2]</sup> . Irbesartan (0 μM, 20 μM, 40 μM and 60 μM) suppresses Th22 cells differentiation in vitro <sup>[2]</sup> . Irbesartan (20 μM) inhibits Th22 cells related proinflammatory response of TECs in vitro <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Irbesartan (oral gavage; 50 mg/kg/d; once daily) reduces Th22 lymphocytosis and serum IL-22 level in Ang II-infused mice <sup>[2]</sup> . Irbesartan (oral gavage; 50 mg/kg/d; once daily) exerts obvious renoprotective effects <sup>[2]</sup> . Irbesartan (oral gavage; 50 mg/kg/d; once daily) relieves systemic inflammation and renal fibrosis in hypertension mice induced by Ang II <sup>[2]</sup> . Irbesartan hydrochloride (20 μM; for 3 h) can attenuate Th22 cells recruitment and IL-22 secretion, which might be through inhibiting chemotaxis in hypertensive renal injury mice <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Yong Zhong, et al. Irbesartan may relieve renal injury by suppressing Th22 cells chemotaxis and infiltration in Ang II-induced hypertension. *Int Immunopharmacol*
- [2]. Schupp M, et al. Angiotensin type 1 receptor blockers induce peroxisome proliferator-activated receptor-gamma activity. *Circulation*. 2004 May 4;109(17):2054-7. Epub 2004 Apr 26.
- [3]. Ruiz E, et al. Importance of intracellular angiotensin II in vascular smooth muscle cell apoptosis: inhibition by the angiotensin AT1 receptor antagonist irbesartan. *Eur J Pharmacol*. 2007 Jul 19;567(3):231-9. Epub 2007 Apr 6.
- [4]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019 Feb;53(2):211-216.

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

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