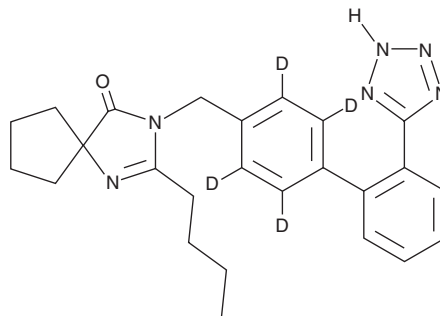


# PRODUCT INFORMATION



## Irbesartan-d<sub>4</sub> Item No. 25509

**CAS Registry No.:** 1216883-23-6  
**Formal Name:** 3-((2'-(2H-tetrazol-5-yl)-[1,1'-biphenyl]-4-yl)-2,3,5,6-d<sub>4</sub>methyl)-2-butyl-1,3-diazaspiro[4.4]non-1-en-4-one  
**MF:** C<sub>25</sub>H<sub>24</sub>D<sub>4</sub>N<sub>6</sub>O  
**FW:** 432.6  
**Chemical Purity:** ≥98% (Irbesartan)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Irbesartan-d<sub>4</sub> is intended for use as an internal standard for the quantification of irbesartan (Item No. 11952) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Irbesartan-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the irbesartan-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Irbesartan-d<sub>4</sub> is soluble in methanol (warmed).

### Description

Irbesartan is an antagonist of the angiotensin II type 1 (AT<sub>1</sub>) receptor (K<sub>i</sub> = 1.3 nM).<sup>1</sup> It is an insurmountable antagonist of AT<sub>1</sub>, as its antagonism cannot be overcome by increasing concentrations of angiotensin II.<sup>2</sup> Irbesartan (3, 10, and 30 mg/kg) reduces blood pressure in stroke-prone spontaneously hypertensive rats and increases survival of SPSH rats fed a high-salt low-protein diet.<sup>3</sup> It also reduces plaque formation, collagen content, as well as the increased expression of the AT<sub>1</sub> receptor, PDGF-b, MCP-1, and VCAM-1 in a model of diabetes-induced atherosclerosis using apolipoprotein E (ApoE) knockout mice with diabetes induced by streptozotocin (STZ; Item No. 13104).<sup>4</sup> Formulations containing irbesartan have been used, alone and in combination with diuretics, in the treatment of hypertension.

### References

1. Burnier, M. Angiotensin II type 1 receptor blockers. *Circulation* **103**(6), 904-912 (2001).
2. Gradman, A.H. AT<sub>1</sub>-receptor blockers: Differences that matter. *J. Hum. Hypertens.* **16**(Suppl 3), S9-S16 (2002).
3. Shimamura, T., Masui, M., Torii, M., *et al.* Hypotensive and prophylactic effects of angiotensin II subtype 1 receptor antagonist, irbesartan, in stroke-prone spontaneously hypertensive rats. *Clin. Exp. Hypertens.* **26**(1), 27-42 (2004).
4. Candido, R., Allen, T.J., Lassila, M., *et al.* Irbesartan but not amlodipine suppresses diabetes-associated atherosclerosis. *Circulation* **109**(12), 1536-1542 (2004).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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