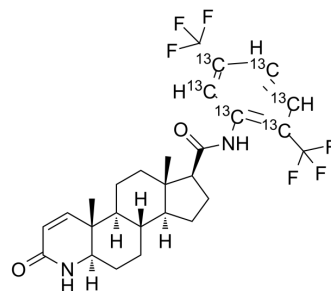


## Dutasteride-<sup>13</sup>C<sub>6</sub>

<b>Cat. No.:</b>	HY-13613S
<b>CAS No.:</b>	1217685-27-2
<b>Molecular Formula:</b>	C <sub>21</sub> <sup>13</sup> C <sub>6</sub> H <sub>30</sub> F <sub>6</sub> N <sub>2</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	534.49
<b>Target:</b>	Apoptosis; 5 alpha Reductase
<b>Pathway:</b>	Apoptosis; Metabolic Enzyme/Protease
<b>Storage:</b>	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Dutasteride- <sup>13</sup> C <sub>6</sub> is the <sup>13</sup> C labeled Dutasteride[1]. Dutasteride (GG745) is a potent inhibitor of both 5α-reductase isozymes. Dutasteride may possess off-target effects on the androgen receptor (AR) due to its structural similarity to DHT[2].
<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> . 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]. Lazier CB, et al. Dutasteride, the dual 5alpha-reductase inhibitor, inhibits androgen action and promotes cell death in the LNCaP prostate cancer cell line. *Prostate*. 2004 Feb 1;58(2):130-44.
- [3]. Biancolella M, et al. Effects of dutasteride on the expression of genes related to androgen metabolism and related pathway in human prostate cancer cell lines. *Invest New Drugs*. 2007 Oct;25(5):491-7.
- [4]. Bramson HN, et al. Unique preclinical characteristics of GG745, a potent dual inhibitor of 5AR. *J Pharmacol Exp Ther*. 1997 Sep;282(3):1496-502.
- [5]. Andriole GL, et al. Clinical usefulness of serum prostate specific antigen for the detection of prostate cancer is preserved in men receiving the dual 5alpha-reductase inhibitor dutasteride. *J Urol*. 2006 May;175(5):1657-62.
- [6]. Margiotta-Casaluci L, et al. Mode of action of human pharmaceuticals in fish: the effects of the 5-alpha-reductase inhibitor, dutasteride, on reproduction as a case study. *Aquat Toxicol*. 2013 Mar 15;128-129:113-23.

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

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