

# PRODUCT INFORMATION



## Desogestrel-<sup>13</sup>C<sub>2</sub>-d<sub>2</sub> Item No. 30764

**Formal Name:** (8S,9S,10R,13S,14S,17R)-13-ethyl-17-(ethynyl-<sup>13</sup>C<sub>2</sub>)-11-methylene-2,3,6,7,8,9,10,11,12,13,14,15,16,17-tetradecahydro-1H-cyclopenta[a]phenanthren-16,16-d<sub>2</sub>-17-ol

**MF:** C<sub>20</sub>[<sup>13</sup>C]<sub>2</sub>H<sub>28</sub>D<sub>2</sub>O

**FW:** 314.5

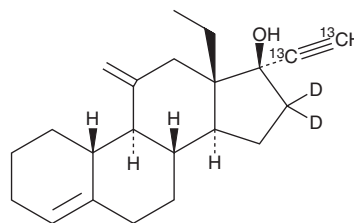
**Chemical Purity:** ≥95% (Desogestrel)

**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>2</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

Desogestrel-<sup>13</sup>C<sub>2</sub>-d<sub>2</sub> is intended for use as an internal standard for the quantification of desogestrel (Item No. 23651) 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).

Desogestrel-<sup>13</sup>C<sub>2</sub>-d<sub>2</sub> is supplied as a solid. A stock solution may be made by dissolving the desogestrel-<sup>13</sup>C<sub>2</sub>-d<sub>2</sub> in the solvent of choice, which should be purged with an inert gas. Desogestrel-<sup>13</sup>C<sub>2</sub>-d<sub>2</sub> is slightly soluble in methanol and chloroform.

### Description

Desogestrel is a synthetic progestogen.<sup>1</sup> It inhibits ovulation and prevents fertilization in rabbits and mice. Desogestrel inhibits rhodamine 123 (Item No. 16672) efflux, a measure of P-glycoprotein activity, *ex vivo* in human lymphocytes and CD8<sup>+</sup> T cells in a dose-dependent manner.<sup>2</sup> Formulations containing desogestrel have been used as oral contraceptives and for the treatment of polycystic ovary syndrome.

### References

1. van der Vies, J. and de Visser, J. Endocrinological studies with desogestrel. *Arzneimittelforschung* **33(2)**, 231-236 (1983).
2. Fröhlich, M., Albermann, N., Sauer, A., *et al.* *In vitro* and *ex vivo* evidence for modulation of P-glycoprotein activity by progestins. *Biochem. Pharmacol.* **68(12)**, 2409-2416 (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.

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