

# PRODUCT INFORMATION



## Ochratoxin C-<sup>13</sup>C<sub>20</sub> Item No. 40239

**Formal Name:** ethyl ((R)-5-chloro-8-hydroxy-3-(methyl-<sup>13</sup>C)-1-oxoisochromane-7-carboxyl-<sup>13</sup>C<sub>10</sub>)-L-phenylalaninate-<sup>13</sup>C<sub>9</sub>

**Synonyms:** Ochratoxin A-<sup>13</sup>C<sub>20</sub> ethyl ester, OTC-<sup>13</sup>C<sub>20</sub>, OTA-<sup>13</sup>C<sub>20</sub> ethyl ester

**MF:** C<sub>2</sub>[<sup>13</sup>C]<sub>20</sub>H<sub>22</sub>ClNO<sub>6</sub>

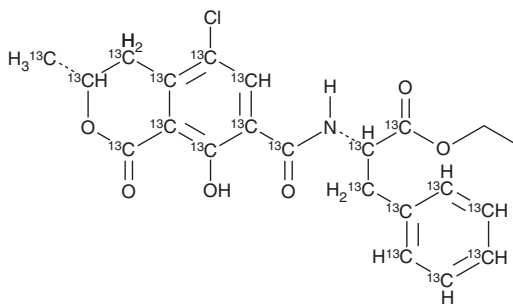
**FW:** 451.7

**Purity:** ≥98%

**Supplied as:** A solution in acetonitrile

**Storage:** -20°C

**Stability:** ≥4 years



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

### Description

OTC-<sup>13</sup>C<sub>20</sub> is intended for use as an internal standard for the quantification of ochratoxin C (Item No. 20183) by GC- or LC-MS. OTC is a mycotoxin that has been found in *Aspergillus* and is an active metabolite of OTA (Item No. 11439).<sup>1,2</sup> It is formed from OTA by gut microbiota, however, OTA can also be formed from OTC *in vivo*.<sup>2,3</sup> OTC inhibits the proliferation and differentiation of THP-1 monocytes (IC<sub>50</sub>s = 126 and 91 ng/ml, respectively) and induces apoptosis in the same cells when used at concentrations of 100 or 1,000 ng/ml.<sup>1</sup> It induces mortality in zebrafish embryos (LC<sub>50</sub> = 0.32 nM).<sup>4</sup> OTC has been found in red wine.<sup>5</sup>

### References

1. Müller, G., Rosner, H., Rohrmann, B., *et al.* Effects of the mycotoxin ochratoxin A and some of its metabolites on the human cell line THP-1. *Toxicology* **184**(1), 69-82 (2003).
2. Galtier, P. and Alvinerie, M. *In vitro* transformation of ochratoxin A by animal microbial floras. *Ann. Rech. Vet.* **7**(1), 91-98 (1976).
3. Fuchs, R., Hult, K., Peraica, M., *et al.* Conversion of ochratoxin C into ochratoxin A *in vivo*. *Appl. Environ. Microbiol.* **48**(1), 41-42 (1984).
4. Csenki, Z., Garai, E., Faisal, Z., *et al.* The individual and combined effects of ochratoxin A with citrinin and their metabolites (ochratoxin B, ochratoxin C, and dihydrocitrinone) on 2D/3D cell cultures, and zebrafish embryo models. *Food Chem. Toxicol.* **158**, 112674 (2021).
5. Remiro, R., Ibáñez-Vea, M., González-Peñas, E., *et al.* Validation of a liquid chromatography method for the simultaneous quantification of ochratoxin A and its analogues in red wines. *J. Chromatogr. A* **1217**(52), 8249-8256 (2010).

#### 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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