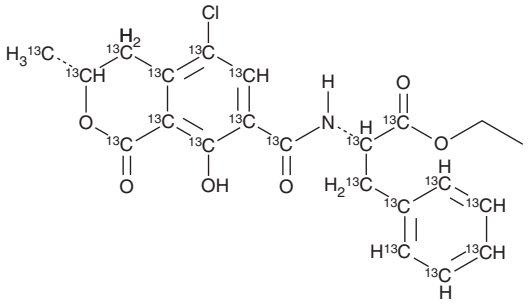
PRODUCT INFORMATION

Ochratoxin C-$^{13}C_{20}$

Item No. 40239

Formal Name:	ethyl ((R)-5-chloro-8-hydroxy-3-(methyl-^{13}C)-1-oxoisochromane-7-carbonyl-$^{13}C_{10}$)-L-phenylalaninate-$^{13}C_9$
Synonyms:	Ochratoxin A-$^{13}C_{20}$ ethyl ester, OTC-$^{13}C_{20}$, OTA-$^{13}C_{20}$ ethyl ester
MF:	$C_2[^{13}C]_{20}H_{22}ClNO_6$
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-$^{13}C_{20}$ 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).[1,2] It is formed from OTA by gut microbiota, however, OTA can also be formed from OTC *in vivo*.[2,3] OTC inhibits the proliferation and differentiation of THP-1 monocytes (IC_{50}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.[1] It induces mortality in zebrafish embryos (LC_{50} = 0.32 nM).[4] OTC has been found in red wine.[5]

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 microbioal 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).

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