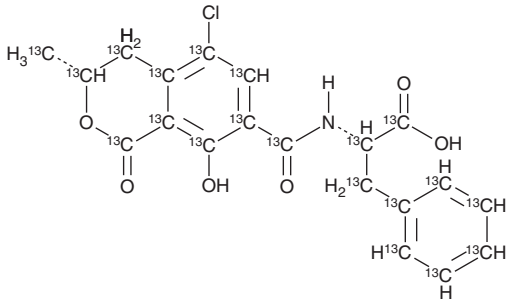
PRODUCT INFORMATION

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

Item No. 31295

CAS Registry No.:	911392-42-2
Formal Name:	N-[[(3R)-5-chloro-3,4-dihydro-8-hydroxy-3-(methyl-^{13}C)-1-oxo-1H-2-benzopyran-7-yl-1,3,4,4a,5,6,7,8,8a-$^{13}C_9$]carbonyl-^{13}C]-L-phenylalanine-$^{13}C_9$
Synonym:	OTA-$^{13}C_{20}$
MF:	$[^{13}C]_{20}H_{18}ClNO_6$
FW:	423.7
Purity:	≥98%
Supplied as:	A 10 µg/ml solution in acetonitrile
Storage:	-20°C
Stability:	≥2 years



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

Description

OTA-$^{13}C_{20}$ is intended for use as an internal standard for the quantification of OTA (Item No. 11439) by GC- or LC-MS. OTA is a mycotoxin that has been found in *Penicillium* and is an active metabolite of OTC (Item No. 20183).[1-3] It is formed from OTC *in vivo*, however, OTC can also be formed from OTA by gut microbiota.[1,4] OTA (120 µg/kg) increases renal lipid peroxide levels and the number of apoptotic cells, as well as reduces renal superoxide dismutase (SOD) activity in rats.[2] Topical application of OTA (80 µg/animal) induces DNA damage, cell cycle arrest at the G_0/G_1 phase, and apoptosis in mouse skin cells.[3] It also initiates tumor formation in a two-stage mouse skin tumorigenesis model. OTA has been found in food products and poultry feed.[5,6]

References

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2. Petrik, J., Zanić-Grubisić, T., Barisić, K., *et al.* Apoptosis and oxidative stress induced by ochratoxin A in rat kidney. *Arch. Toxicol.* **77(12)**, 685-693 (2003).
3. Kumar, R., Ansari, K.M., Chaudhari, B.P., *et al.* Topical application of ochratoxin A causes DNA damage and tumor initiation in mouse skin. *PLoS One* **7(10)**, (2012).
4. Galtier, P. and Alvinerie, M. *In vitro* transformation of ochratoxin A by animal microbioal floras. *Ann. Rech. Vet.* **7(1)**, 91-98 (1976).
5. Al-Taher, F., Cappozzo, J., Zweigenbaum, J., *et al.* Detection and quantitation of mycotoxins in infant cereals in the U.S. market by LC-MS/MS using a stable isotope dilution assay. *Food Control* **72(Part A)**, 27-35 (2017).
6. Ezekiel, C.N., Bandyopadhyay, R., Sulyok, M., *et al.* Fungal and bacterial metabolites in commercial poultry feed from Nigeria. *Food Addit. Contam. Part A Chem. Anal. Control Expo. Risk Assess.* **29(8)**, 1288-1299 (2012).

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