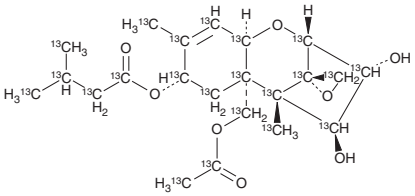
PRODUCT INFORMATION

HT-2 Toxin-$^{13}C_{22}$

Item No. 31299

CAS Registry No.: 1486469-92-4
Formal Name: (2S,2'R,3'R,4'S,5'S,5a'R,7'S,9a'R)-5a'-((acetoxy-$^{13}C_2$)methyl-^{13}C)-3',4'-dihydroxy-5',8'-di(methyl-^{13}C)-2',3',4',5',5a',6',7',9a'-octahydrospiro[oxirane-2,10'-[2,5]methanobenzo[b]oxepin]-7'-yl-2,2',3,3',4',5',5a',6',7',8',9',9a'-$^{13}C_{12}$ 3-(methyl-^{13}C) butanoate-1,2,3,4-$^{13}C_4$
MF: $[^{13}C]_{22}H_{32}O_8$
FW: 446.3
Purity: ≥98%
Supplied as: A 25 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

HT-2 toxin-$^{13}C_{22}$ is intended for use as an internal standard for the quantification of HT-2 toxin (Item No. 20431) by GC- or LC-MS. HT-2 toxin is a type A trichothecene mycotoxin and an active, deacetylated metabolite of the trichothecene mycotoxin T-2 toxin (Item No. 11444).[1,2] Like T-2 toxin, HT-2 toxin inhibits protein synthesis and cell proliferation in plants.[2] HT-2 toxin also reduces viability of HepG2, A549, HEp-2, Caco-2, A-204, U937, Jurkat, and RPMI-8226 cancer cells with IC_{50} values ranging from 3.1 to 23 ng/ml and human umbilical vein endothelial cells with an IC_{50} value of 56.4 ng/ml.[1] It induces oxidative stress, DNA damage, and autophagy in, as well as halts the development of, cultured mouse embryos when used at a concentration of 10 nM.[3] HT-2 toxin has been found in cereal grains and food products.[4,5]

References

1. Nielsen, C., Casteel, M., Didier, A., *et al.* Trichothecene-induced cytotoxicity on human cell lines. *Mycotoxin Res.* **25(2)**, 77-84 (2009).
2. Nathanail, A.V., Varga, E., Meng-Reiterer, J., *et al.* Metabolism of the fusarium mycotoxins T-2 toxin and HT-2 toxin in wheat. *J. Agric. Food Chem.* **63(35)**, 7862-7872 (2015).
3. Zhang, L., Li, L., Xu, J., *et al.* HT-2 toxin exposure induces mitochondria dysfunction and DNA damage during mouse early embryo development. *Reprod. Toxicol.* **85**, 104-109 (2019).
4. Langseth, W. and Rundberget, T. The occurrence of HT-2 toxin and other trichothecenes in Norwegian cereals. *Mycopathologia* **147(3)**, 157-165 (1999).
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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM