

PRODUCT INFORMATION

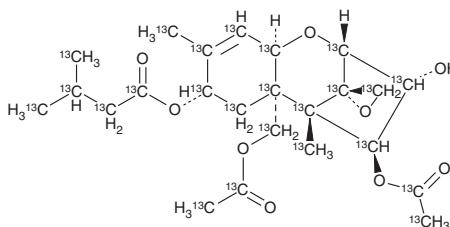


T-2 Toxin-¹³C₂₄ Item No. 31300

Formal Name: (2S,2'R,3'R,4'S,5'S,5a'R,7'S,9a'R)-4'-(acetoxymethyl)-5a'-((acetoxymethyl)-3-hydroxy-5',8'-di(methyl-¹³C)-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'-¹³C₂₄ 3-(methyl-¹³C)butanoate-1,2,3,4-¹³C₄

Synonyms: Fusariotoxin T-2-¹³C₂₄, Insariotoxin-¹³C₂₄, Mycotoxin T-2-¹³C₂₄

MF: [¹³C]₂₄H₃₄O₉
FW: 490.3
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

T-2 toxin-¹³C₂₄ is intended for use as an internal standard for the quantification of T-2 toxin (Item No. 11444) by GC- or LC-MS. T-2 toxin is a trichothecene mycotoxin that has been found in *Fusarium*.¹ It binds to and inhibits peptidyltransferase in the 60S ribosomal subunit, inducing a ribotoxic stress response that triggers JNK and p38 MAPK signaling. T-2 toxin (3 nM) decreases toll-like receptor expression and LPS-induced production of IL-1β, TNF-α, and nitric oxide (NO) in, and is cytotoxic to (IC₅₀ = 19.47), primary pig alveolar macrophages (PAMs).² *In vivo*, T-2 toxin induces production of reactive oxygen species (ROS), lipid peroxidation, and glutathione (GSH) depletion in mouse brain and is lethal to mice (LD₅₀s = 1.54-5.94 mg/kg).¹ It also induces hepatocyte apoptosis and dyslipidemias in mice. T-2 toxin has been found in *Fusarium*-infected wheat, barley, and rice crops both in fields and in storage.

References

1. Doi, K. and Uetsuka, K. Mechanisms of mycotoxin-induced neurotoxicity through oxidative stress-associated pathways. *Int. J. Mol. Sci.* **12**(8), 5213-5237 (2011).
2. Seeboth, J., Solinhac, R., Oswald, I.P., *et al.* The fungal T-2 toxin alters the activation of primary macrophages induced by TLR-agonists resulting in a decrease of the inflammatory response in the pig. *Vet. Res.* **43**(1), 1-18 (2012).

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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