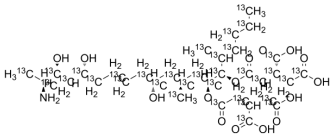
Fumonisin B1-$^{13}C_{34}$

Cat. No.:	HY-N6719S
CAS No.:	1217458-62-2
Molecular Formula:	$^{13}C_{34}H_{59}NO_{15}$
Molecular Weight:	755.58
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fumonisin B1-$^{13}C_{34}$ is the ^{13}C labeled Fumonisin B1 (HY-N6719)[1]. Fumonisin B1 is a mycotoxin produced from Fusarium moniliforme. Fumonisin B1 is a potent inhibitor of sphingosine N-acyltransferase (ceramide synthase) and disrupts de novo sphingolipid biosynthesis. Fumonisin B1 is the most abundant and toxic fumonisin[2][3].
IC_{50} & Target	Sphingosine N-acyltransferase[2]
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. Fumonisin B1 alters the gene expression and signal transduction pathways in monkey kidney cells[2]. Fumonisin B1 increases the initial disruption of sphingolipid metabolism and the accumulation of sphinganine in LLC-PK1 kidney cells, causes DNA damage of apoptotic type in rat astrocytes[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Henry MH, et al. The toxicity of fumonisin B1, B2, and B3, individually and in combination, in chicken embryos. Poult Sci. 2001 Apr;80(4):401-7.

[2]. Wang SK, et al. Effect of fumonisin B_1 on the cell cycle of normal human liver cells. Mol Med Rep. 2013 Jun;7(6):1970-6.

[3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-220.

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