

Product Data Sheet

Product Name: 4-hydroxy Nonenal Glutathione-d3

Cat. No.: GC92022

Chemical Properties

Cas. No.

Chemical Name N5-((2R)-1-((carboxymethyl)amino)-3-(((3S)-5-hydroxy-2-(pentyl-5,5,5-d3)tetrahydrofuran-3-yl)thio)-1-oxopropan-2-yl)-D-glutamine

SMILES O=C(NCC(O)=O)[C@H](CS[C@H]1CC(O)OC1CCCC([2H])([2H])[2H])NC(CC[C@@H](N)C(O)=O)=O

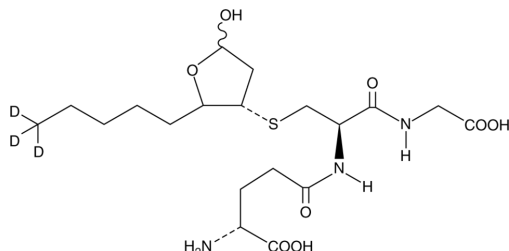
Formula $C_{19}H_{30}D_3N_3O_8S$ M.Wt 466.6

Solubility Water: 10 mg/ml Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

4-hydroxy Nonenal Glutathione-d₃ (4-HNE-GSH-d₃) is intended for use as an internal standard for the quantification of 4-HNE-GSH by GC- or LC-MS. 4-hydroxy-Nonenal (4-HNE) is a major aldehyde produced during the lipid peroxidation of ω -6 polyunsaturated fatty acids, such as arachidonic acid and linoleic acid.^{1,2} 4-HNE-GSH is a major adduct formed by the reaction of 4-HNE with GSH.^{3,4,5,6} 4-HNE-GSH levels in liver, plasma, or isolated cells can serve as biomarkers for oxidative stress.⁷ The trapping of 4-HNE by glutathione to give HNE-GSH prevents the formation of DNA adducts with 4-HNE.^{8,9} In human polymorphonuclear leukocytes, HNE-GSH is metabolized to

Caution: Product has not been fully validated for medical applications. For research use only.

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1,4-dihydroxynonene glutathione (DHN-GSH), 4-hydroxynonenoic acid glutathione (HNA-GSH), and 4-hydroxy nonenal mercapturic acid (HNE-MA).³

References:

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