

Product Data Sheet

Product Name: Protectin D1-d5

Cat. No.: GC48993

Chemical Properties

Cas. No. N/A

SMILES O[C@@H](C/C=C\C([2H])([2H])C([2H])([2H])[2H])/C=C\C=C\C=C\C[C@H](O)C/C=C\C/C=C\C\CCC(O)=O

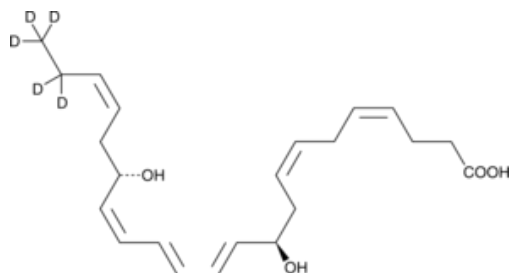
Formula C₂₂H₂₇D₅O₄ M.Wt 365.5

Solubility Ethanol: 1 mg/ml Storage -80°C

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

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

Structure



Background

Protectin D1-d₅ is intended for use as an internal standard for the quantification of protectin D1 by GC- or LC-MS. Protectin D1 is a specialized pro-resolving mediator (SPM) synthesized from docosahexaenoic acid.¹ DHA is oxidized to 16S,17S-epoxy protectin, which is converted to protectin D1 enzymatically. Protectin D1 increases phagocytosis of apoptotic polymorphonuclear leukocytes (PMNs) by macrophages in a non-phlogistic manner and is generated *in vitro* during macrophage-apoptotic interactions.² It enhances phagocytosis in mice after 24 hours, but not at the initiation or peak of inflammation. It also decreases PMN infiltration in a zymosan-induced mouse model of inflammation when administered at a dose of 300 ng per animal. Protectin D1 (200 µg, i.v.) inhibits increases in neutrophil counts in bronchoalveolar fluid (BALF) and lung myeloperoxidase activity in a mouse model of pulmonary injury and inflammation induced by intratracheal LPS instillation.³ It also

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decreases pulmonary edema and promotes neutrophil apoptosis in BALF.

1.Rodriguez, A.R., and Spur, B.W.Total synthesis of pro-resolving and tissue-regenerative protectin sulfido-conjugatesTetrahedron Lett.56(42)5811-5815(2015) 2.Schwab, J.M., Chiang, N., Arita, M., et al.Resolvin E1 and protectin D1 activate inflammation-resolution programmesNature447(7146)869-874(2007) 3.Li, X., Li, C., Liang, W., et al.Protectin D1 promotes resolution of inflammation in a murine model of lipopolysaccharide-induced acute lung injury via enhancing neutrophil apoptosisChin. Med. J. (Engl.)127(5)810-814(2014)

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