

Product Data Sheet

Product Name: 17(R)-Resolvin D3

Cat. No.: GC45307

Chemical Properties

Cas. No. 1427475-53-3

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

Formula C22H32O5

M.Wt 376.5

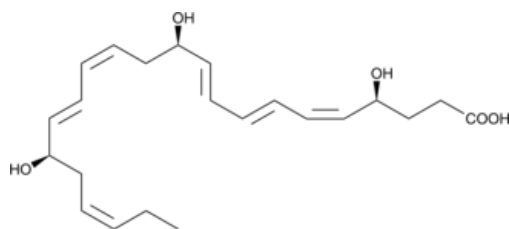
Solubility DMF: 50 mg/ml, DMSO: unstable, Ethanol: 50 mg/ml, PBS (pH 7.2): 0.5 mg/ml

Storage Store at -20°C

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

17(R)-Resolvin D3 (17(R)-RvD3) is an aspirin-triggered epimer of resolvin D3. It is produced from docosahexaenoic acid by COX-2 in the presence of aspirin via a 17(R)-hydroperoxy DHA (17(R)-HDHA;) intermediate and has been found in mouse inflammatory exudates.^{1,2} 17(R)-RvD3 reduces transmigration of isolated human polymorphonuclear cells (PMNs) and induces efferocytosis of apoptotic PMNs by macrophages.² 17(R)-RvD3 (10 ng/animal) reduces transmigration of neutrophils into the peritoneal cavity, as well as decreases the levels of IL-6 and increases the levels of IL-10 in inflammatory exudate in a mouse model of zymosan-induced peritonitis. It activates GPR32 in a β -arrestin reporter assay and increases phagocytosis to a greater degree in CHO cells overexpressing GPR32 compared to mock-transfected cells. 17(R)-RvD3 increases phagocytosis of etoposide-generated tumor cell debris by monocyte-derived macrophages in H460 human lung carcinoma cells in a concentration-dependent manner.³ It also inhibits tumor growth in a mouse model of Lewis lung

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

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carcinoma when administered at a dose of 0.6 µg/kg per day.

References

1. Winkler, J.W., Uddin, J., Serhan, C.N., et al. Stereocontrolled total synthesis of the potent anti-inflammatory and pro-resolving lipid mediator resolvin D3 and its aspirin-triggered 17R-epimer. *Org. Lett.* 15(7), 1424-1427 (2013).
2. Dalli, J., Winkler, J.W., Colas, R.A., et al. Resolvin D3 and aspirin-triggered resolvin D3 are potent immunoresolvents. *Chem. Biol.* 20(2), 188-201 (2013).
3. Gilligan, M.M., Gartng, A., Sulcier, M.L., et al. Aspirin-triggered proresolving mediators stimulate resolution in cancer. *Proc. Nat. Acad. Sci. USA* 116(13), 6292-6297 (2019).

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