

## Product Data Sheet

Product Name: 10-Nitrolinoleate

Cat. No.: GC41867

### Chemical Properties

Cas. No. 774603-04-2

SMILES CCCCC/C=C\C/C([N+])([O-])=O=C\CCCCCCCC(O)=O

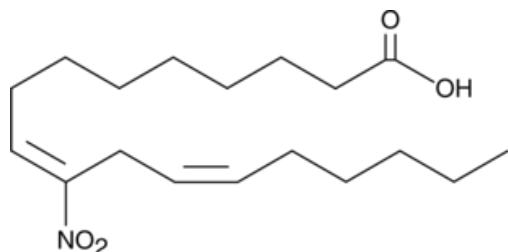
Formula C<sub>18</sub>H<sub>31</sub>NO<sub>4</sub> M.Wt 325.4

Solubility DMF: 30 mg/ml, DMSO: 25 mg/ml, Ethanol: 30 mg/ml, Ethanol: PBS (pH 7.2) (1:1): 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

10-Nitrolinoleate is the product of nitration of linoleate by NO-derived reactive species. Other nitrolinoleates detected in human plasma and urine include 9-, 12-, and 13-nitrolinoleate. Nitrolinoleates activate peroxisome proliferator-activated receptor  $\gamma$  (PPAR $\gamma$ ;  $K_i$  = 133 nM), inducing CD36 expression in macrophages, adipocyte differentiation, and glucose uptake. Nitrolinoleates can also be metabolized by smooth muscle cells to produce nitrite derivatives which in turn form NO, leading to increased cGMP production and smooth muscle relaxation. Through the same mechanism, nitrolinoleate-derived NO suppresses leukocyte adhesion, in part through nitrosation of CD40. Alternatively, nitrolinoleates can act independently of NO/cGMP and PPAR $\gamma$  signaling to suppress neutrophil and macrophage functions.

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

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