

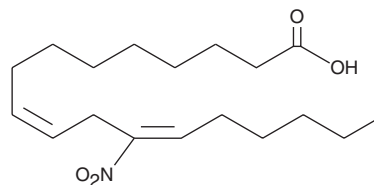
PRODUCT INFORMATION



12-Nitrolinoleate

Item No. 10007623

CAS Registry No.: 774603-05-3
Formal Name: 12-nitro-9Z,12E-octadecadienoic acid
Synonyms: 12-LNO₂, 12-NO₂-LA,
12-nitro-9,12-Octadecadienoic Acid
MF: C₁₈H₃₁NO₄
FW: 325.4
Purity: ≥98%
Supplied as: A 500 µg/ml solution in ethanol
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

12-Nitrolinoleate is an agonist of peroxisome proliferator-activated receptor γ (PPAR γ) and a nitrated form of linoleic acid (Item Nos. 90150 | 90150.1 | 21909).¹ It is formed upon exposure to acidified nitrite and is found in human red blood cells and plasma.¹ 12-Nitrolinoleate induces PPAR γ -dependent gene expression in a reporter assay using MCF-7 cells expressing human PPAR γ (EC₅₀ = 0.045 μ M). It inhibits LPS-induced secretion of IL-6, TNF- α , and chemokine (C-C motif) ligand 2 (CCL2) in THP-1 and RAW 264.7 macrophages when used at a concentration of 2.5 μ M.³ 12-Nitrolinoleate inhibits LPS-induced NF- κ B transcriptional activity in a reporter assay using RAW 264.7 macrophages and TNF- α -induced increases in vascular cell adhesion molecule-1 (VCAM-1) in human umbilical vein endothelial cells (HUVECs). It increases the levels of heme oxygenase-1 (HO-1) in primary human aortic endothelial cells when used at concentrations of 1, 5, or 10 μ M.³

References

1. Baker, P.R.S., Schopfer, F.J., Sweeney, S., *et al.* Red cell membrane and plasma linoleic acid nitration products: Synthesis, clinical identification, and quantitation. *Proc. Natl. Acad. Sci. USA* **101**(32), 11577-11582 (2004).
2. Cui, T., Schopfer, F.J., Zhang, J., *et al.* Nitrated fatty acids: Endogenous anti-inflammatory signaling mediators. *J. Biol. Chem.* **281**(47), 35686-35698 (2006).
3. Wright, M.M., Schopfer, F.J., Baker, P.R., *et al.* Fatty acid transduction of nitric oxide signaling: Nitrolinoleic acid potently activates endothelial heme oxygenase 1 expression. *Proc. Natl. Acad. Sci. USA* **103**(11), 4299-4304 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM