

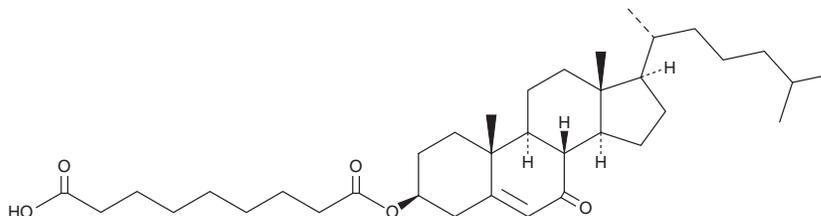
PRODUCT INFORMATION



oxLig-1 (technical grade)

Item No. 40740

CAS Registry No.: 352523-18-3
Formal Name: 3β-[(8-carboxy-1-oxooctyl)oxy]-cholest-5-en-7-one
Synonym: 7-Ketocholesteryl-9-carboxynonanoate
MF: C₃₆H₅₈O₅
FW: 570.8
Purity: ≥80%
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

oxLig-1 (technical grade) is supplied as a solid. A stock solution may be made by dissolving the oxLig-1 (technical grade) in the solvent of choice, which should be purged with an inert gas. oxLig-1 (technical grade) is slightly soluble (0.1-1 mg/ml) in DMSO.

Description

oxLig-1 is an ω-carboxylated 7-ketocholesteryl ester and a lipid component of oxidized LDL (oxLDL).¹ It binds to the ligand-binding domain of peroxisome proliferator-activated receptor γ (PPARγ), an effect that can be reversed by the PPARγ agonist troglitazone (Item No. 71750), and also binds to CD36, also known as scavenger receptor B2, when used at a concentration of 50 μg/ml.^{2,3} oxLig-1 (20 μg/ml) increases cholesterol efflux and protein levels of liver X receptor α (LXRα) and ATP-binding cassette transporter 1 subfamily A (ABCA1) in THP-1 macrophages. Liposomes containing oxLig-1 and complexed with apolipoprotein H, also known as β₂-glycoprotein I (β₂-GPI), bind to an anti-apolipoprotein H antibody, which mediates uptake by J774A.1 macrophages.¹ oxLig-1 decreases intracellular lipid accumulation induced by oleic acid (Item Nos. 90260 | 24659) in HepG2 cells, as well as hepatic lipid accumulation in mice fed a high-fat diet.³ Serum levels of IgG autoantibodies targeting a complex of oxLig-1 and apolipoprotein H are increased in patients with antiphospholipid syndrome with a history of arterial thrombosis.⁴

References

1. Kobayashi, K., Matsuura, E., Liu, Q., *et al.* A specific ligand for β₂-glycoprotein I mediates autoantibody-dependent uptake of oxidized low density lipoprotein by macrophages. *J. Lipid Res.* **42(5)**, 697-709 (2001).
2. Chi, Y., Wang, L., Liu, Y., *et al.* 7-ketocholesteryl-9-carboxynonanoate enhances ATP binding cassette transporter A1 expression mediated by PPARγ in THP-1 macrophages. *Atherosclerosis* **234(2)**, 461-468 (2014).
3. Fu, C., Xiang, M.-L., Chen, S., *et al.* Molecular drug simulation and experimental validation of the CD36 receptor competitively binding to long-chain fatty acids by 7-ketocholesteryl-9-carboxynonanoate. *ACS Omega* **8(31)**, 28277-28289 (2023).
4. Lopez, D., Kobayashi, K., Merrill, J.T., *et al.* IgG autoantibodies against β₂-glycoprotein I complexed with a lipid ligand derived from oxidized low-density lipoprotein are associated with arterial thrombosis in antiphospholipid syndrome. *Clin. Dev. Immunol.* **10(2-4)**, 203-211 (2003).

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.

WARRANTY AND LIMITATION OF REMEDY

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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