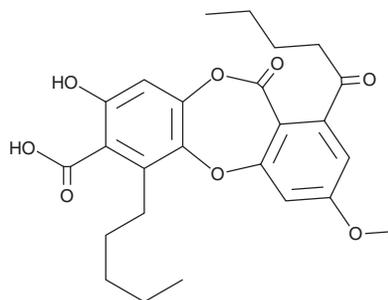


# PRODUCT INFORMATION



## Lobaric Acid Item No. 25205

**CAS Registry No.:** 522-53-2  
**Formal Name:** 8-hydroxy-3-methoxy-11-oxo-1-(1-oxopentyl)-6-pentyl-11H-dibenzo[b,e][1,4]dioxepin-7-carboxylic acid  
**MF:** C<sub>25</sub>H<sub>28</sub>O<sub>8</sub>  
**FW:** 456.5  
**Purity:** ≥95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years  
**Item Origin:** Fungus/*Parmelia* sp.



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

### Laboratory Procedures

Lobaric acid is supplied as a solid. A stock solution may be made by dissolving the lobaric acid in the solvent of choice, which should be purged with an inert gas. Lobaric acid is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Lobaric acid is a depsidone metabolite that has been isolated from *Stereocaulon* lichen species with antioxidant, antiproliferative, antiviral, and enzyme inhibitory activities.<sup>1-6</sup> It scavenges superoxide radicals in a cell-free assay (IC<sub>50</sub> = 97.9 μmol) and inhibits proliferation in a panel of leukemia, colorectal, gastric, breast, ovarian, prostate, pancreatic, and lung cancer cell lines (EC<sub>50</sub>s = 15.2-63.9 μg/ml).<sup>2,3</sup> Lobaric acid inhibits protein tyrosine phosphatase 1B (PTP1B; IC<sub>50</sub> = 0.87 μM for the human recombinant enzyme) and production of 12(S)-HETE (Item No. 34570) by 12(S)-lipoxygenase (IC<sub>50</sub> = 28.5 μM).<sup>5,6</sup> *In vivo*, lobaric acid (250 μM) decreases lesion number, but not lesion diameter, in tobacco leaves infected with tobacco mosaic virus (TMV).<sup>4</sup>

### References

1. González, A.G., Pérez, E.M.R., and Barrera, J.B. Chemical constituents of the lichen *Stereocaulon azureum*. *Zeitschrift für Naturforschung C* **47(7-8)**, 503-507 (1992).
2. Thadhani, V.M., Choudhary, M.I., Ali, S., et al. Antioxidant activity of some lichen metabolites. *Nat. Prod. Res.* **25(19)**, 1827-1837 (2011).
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5. Seo, C.S., Sohn, J.H., Ahn, J.S., et al. Protein tyrosine phosphatase 1B inhibitory effects of depsidone and pseudodepsidone metabolites from the Antarctic lichen *Stereocaulon alpinum*. *Bioorg. Med. Chem. Lett.* **19(10)**, 2801-2803 (2009).
6. Bucar, F., Schneider, I., Ögmundsdóttir, H., et al. Anti-proliferative lichen compounds with inhibitory activity on 12(S)-HETE production in human platelets. *Phytomedicine* **11(7-8)**, 602-606 (2004).

#### 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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