

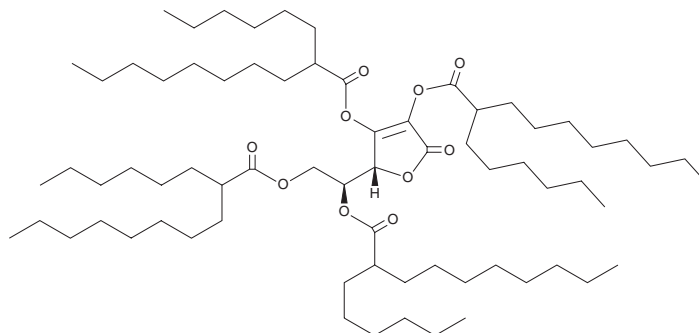
PRODUCT INFORMATION



Ascorbyl Tetraisopalmitate

Item No. 36275

CAS Registry No.: 183476-82-6
Formal Name: 2,3,5,6-tetrakis(2-hexyldecanoate)
L-ascorbic acid
Synonyms: tetra-isopalmitoyl Ascorbic Acid, IPAA,
Tetrahexyldecyl Ascorbate, VC-IP,
Vitamin C-isopalmityl tetraester
MF: C₇₀H₁₂₈O₁₀
FW: 1,129.8
Purity: ≥95%
UV/Vis.: λ_{max}: 223 nm
Supplied as: A neat liquid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Ascorbyl tetraisopalmitate is supplied as a neat liquid. A stock solution may be made by dissolving the ascorbyl tetraisopalmitate in the solvent of choice, which should be purged with an inert gas. Ascorbyl tetraisopalmitate is soluble in organic solvents such as ethanol and dimethyl formamide. The solubility of ascorbyl tetraisopalmitate in these solvents is approximately 10 and 2 mg/ml, respectively.

Description

Ascorbyl tetraisopalmitate is a lipophilic derivative of vitamin C (L-ascorbic acid; Item No. 14656).^{1,2} It protects against UVB-, hydrogen peroxide-, or *tert*-butyl hydroperoxide-induced decreases in cell viability in HaCaT keratinocytes when used at a concentration of 100 μM.¹ Ascorbyl tetraisopalmitate (20 μM) decreases IL-1α and prostaglandin E₂ (PGE₂; Item No. 14010) production in unstimulated and UVB-stimulated HaCaT keratinocytes. Topical application of ascorbyl tetraisopalmitate (1%) increases viable epidermis thickness, stratum corneum water content, and skin smoothness and decreases skin roughness in hairless mice.² Formulations containing ascorbyl tetraisopalmitate have been used in cosmetic products as skin-lightening agents.

References

1. Ochiai, Y., Kaburagi, S., Obayashi, K., *et al.* A new lipophilic pro-vitamin C, tetra-isopalmitoyl ascorbic acid (VC-IP), prevents UV-induced skin pigmentation through its anti-oxidative properties. *J. Dermatol. Sci.* **44**(1), 37-44 (2006).
2. Maia Campos, P.M.B.G., Gianeti, M.D., Camargo, F.B., Jr., *et al.* Application of tetra-isopalmitoyl ascorbic acid in cosmetic formulations: Stability studies and *in vivo* efficacy. *Eur. J. Pharm. Biopharm.* **82**(3), 580-586 (2012).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/29/2022

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