

Produktinformation



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Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic in



PRODUCT INFORMATION



D-(-)-Quinic Acid

Item No. 30212

CAS Registry No.: 77-95-2

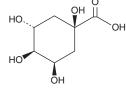
Formal Name: 1α,3R,4α,5R-tetrahydroxy-

cyclohexanecarboxylic acid

MF: $C_7H_{12}O_6$ 192.2 FW: **Purity:** ≥98% Supplied as: A solid Storage: -20°C Stability: ≥4 years

Plant/Citrus limon (L.) Burm.f. Item Origin:

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



Laboratory Procedures

D-(-)-Quinic acid is supplied as a solid. A stock solution may be made by dissolving the D-(-)-quinic acid in the solvent of choice, which should be purged with an inert gas. D-(-)-Quinic acid is soluble in organic solvents such as methanol. It is also soluble in water. We do not recommend storing the aqueous solution for more than one day.

Description

D-(-)-Quinic acid is a hydroxylated cyclohexane carboxylic acid that has been found in coffee beans and has diverse biological activities. 1-4 It inhibits viral replication in, and viral DNA secretion from, HepG2/2.15 cells infected by hepatitis B virus (HBV; $IC_{50}s = 1.6$ and 10.1 μ M, respectively) without affecting cell viability (CC₅₀ = >1,000 μ M).¹ D-(-)-Quinic acid (1 and 2 mg/ml) reduces cell viability in Raji lymphoma cells.² It decreases the proliferation of isolated mouse leukocytes stimulated by LPS or concanavalin A (Item No. 14951) when used at a concentration of 2 mg/ml. D-(-)-Quinic acid (1, 2, and 4 μg/ml) inhibits radiation-induced DNA damage and cell death in isolated human lymphocytes.3 In vivo, D-(-)-quinic acid (200 or 400 mg/kg in drinking water) inhibits aluminum chloride-induced neuronal degeneration, decreases in brain acetylcholinesterase (AChE), glutathione (GSH), and superoxide dismutase (SOD) levels, brain homogenate catalase activity, and increases in time to reach the platform in the Morris water maze test in a rat model of aluminum chloride-induced neurotoxicity.4

References

- 1. Wang, G.-F., Shi, L.-P., Ren, Y.-D., et al. Anti-hepatitis B virus activity of chlorogenic acid, quinic acid and caffeic acid in vivo and in vitro. Antiviral Res. 83(2), 186-190 (2009).
- 2. Akesson, C., Lindgren, H., Pero, R.W., et al. Quinic acid is a biologically active component of the Uncaria tomentosa extract C-Med 100[®]. Int. Immunopharmacol. **5(1)**, 219-229 (2005).
- Cinkilic, N., Cetintas, S.K., Zorlu, T., et al. Radioprotection by two phenolic compounds: Chlorogenic and quinic acid, on X-ray induced DNA damage in human blood lymphocytes in vitro. Food Chem. Toxicol. 53, 359-363 (2013).
- 4. Liu, L., Liu, Y., Zhao, J., et al. Neuroprotective effects of D-(-)-quinic acid on aluminum chloride-induced dementia in rats. Evid. Based Complement. Alternat. Med. 5602597 (2020).

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

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