



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC Handels GmbH

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](https://www.linkedin.com/company/szaboscandic)



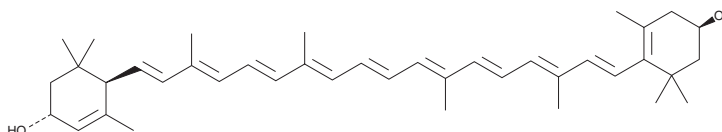
PRODUCT INFORMATION



Lutein

Item No. 10010811

CAS Registry No.: 127-40-2
Formal Name: (6'R)- β , ϵ -carotene-3R,3'R-diol
Synonyms: E 161b, Xanthophyll
MF: $C_{40}H_{56}O_2$
FW: 568.9
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 268, 445, 474 nm
Supplied as: A crystalline solid
Storage: -80°C
Stability: ≥ 2 years



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

Laboratory Procedures

Lutein is supplied as a crystalline solid. A stock solution may be made by dissolving the lutein in the solvent of choice, which should be purged with an inert gas. Lutein is soluble in organic solvents such as chloroform, DMSO, and dimethyl formamide (DMF). The solubility of lutein in chloroform and DMSO is approximately 5 mg/ml and approximately 10 mg/ml in DMF.

Lutein is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, lutein should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Lutein has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Lutein is a dietary carotenoid that has been found in eggs and yellow-colored fruits and vegetables and has diverse biological activities.¹⁻⁴ It reduces hyperglycemia-induced mitochondrial DNA damage and production of reactive oxygen species (ROS) and promotes mitochondrial biogenesis in ARPE-19 cells when used at a concentration of 10 μM .¹ Lutein (20 mg/kg) increases nitric oxide (NO) production and decreases serum levels of endothelin-1 (Item No. 24127) in a rat model of hyperhomocysteinemia.² Dietary administration of lutein (0.2%) decreases monocyte migration and lesion size in an *ApoE*^{-/-} and *Ldlr*^{-/-} mouse models of atherosclerosis. Lutein reduces infarct size and cardiac malondialdehyde (MDA), lactate dehydrogenase (LDH), and troponin T levels, and increases cardiac levels of catalase (CAT), superoxide dismutase (SOD), heme oxygenase-1 (HO-1), and Nrf2 in a rat model of heart failure induced by isoproterenol (Item No. 15592).³ It forms a retinal pigment in human eyes, and high dietary intake of lutein is positively correlated with reduced risk of age-related macular degeneration and cataracts in humans.⁴

References

1. Nanjaiah, H. and Vallikannan, B. *Biotechnol. Appl. Biochem.* **66**(6), 999-1009 (2019).
2. Hajizadeh-Sharafabad, F., Ghoreishi, Z., Maleki, V., et al. *Pharmacol. Res.* **149**, 104477 (2019).
3. Ouyang, B., Li, Z., Ji, X., et al. *Pharm. Biol.* **57**(1), 529-535 (2019).
4. Bungau, S., Abdel-Daim, M., Tit, D.M., et al. *Oxid. Med. Cell. Longev.* 9783429 (2019).

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, 03/07/2022

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