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## Product Data Sheet

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Product Name: 9-cis- $\beta$ -Carotene

Cat. No.: GC62819

### Chemical Properties

Cas. No. 13312-52-2

Formula  $C_{40}H_{56}$  M.Wt 536.87

Solubility Storage

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

### Background

9-cis- $\beta$ -Carotene, a precursor of retinal, is cleaved by beta-carotene oxygenase 1 (BCMO1) to produce 9-cis-retinal. 9-cis- $\beta$ -Carotene inhibits photoreceptor degeneration and restores retinal function in vivo. 9-cis- $\beta$ -Carotene has the potential for the study of congenital stationary night blindness and fundus albipunctatus[1].

9-cis- $\beta$ -Carotene (1  $\mu$ M; 18 hours) formulates with the Miglyol 810 and the "antioxidant mix" is incubated to eye cups. The eye cups are isolated from the neuro-retina attached to the underlying RPE tissue from RPE65rd12 mouse. It prevents S- and M-cones degeneration and leads to over 2- and 9- fold higher m-opsin and s-opsin positive staining compares to the control group[1].

In a mouse model of retinoid cycle defect, RPE65rd12. Mice with an extract of Dunaliella Bardawil algae rich in 9-cis- $\beta$ -Carotene (9CBC) rescues retinal function and preserves cone structure by oral administration[1].

[1]. Sher I, et al. Synthetic 9-cis-beta-carotene inhibits photoreceptor degeneration in cultures of eye cups from rpe65rd12 mouse model of retinoid cycle defect. Sci Rep. 2018 Apr 17;8(1):6130.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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