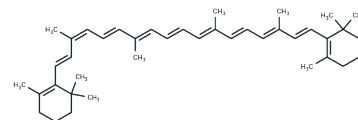


9-cis-β-Carotene

Chemical Properties

CAS No. :	13312-52-2
Formula:	C40H56
Molecular Weight:	536.87
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	9-cis-β-Carotene, a precursor of retinal, is cleaved by beta-carotene oxygenase 1 (BCMO1) to produce 9-cis-retinal. It inhibits photoreceptor degeneration and restores retinal function in vivo.
Targets(IC50)	Others
In vitro	9-cis-β-Carotene (1 μM; 18 hours), combined with Miglyol 810 and an antioxidant mix, is applied to eye cups derived from RPE65rd12 mice, with the neuro-retina still attached to the RPE tissue underneath. This treatment effectively prevents degeneration of S- and M-cones, resulting in more than a 2- and 9-fold increase in m-opsin and s-opsin positive staining, respectively, compared to the control group.
In vivo	In a mouse model exhibiting defects in the retinoid cycle, specifically the RPE65rd12 mutation, administration of an extract from Dunaliella Bardawil algae, which is rich in 9-cis-β-Carotene (9CBC), via oral route, has been shown to rescue retinal function and preserve cone structure.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8626 mL	9.3132 mL	18.6265 mL
5 mM	0.3725 mL	1.8626 mL	3.7253 mL
10 mM	0.1863 mL	0.9313 mL	1.8626 mL
50 mM	0.0373 mL	0.1863 mL	0.3725 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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