Product Data Sheet

Product Name: Retinyl glucoside
Cat. No.: GC17542

Chemical Properties

Cas. No.	136778-12-6		
Chemical Name	(2R,3R,4S,5S,6R)-2-(((2E,4E,6E,8Z)-3,7-dimethyl-9-(2,6,6-trimethylcyclohex-1-en-1-yl)nona-2,4,6,8-tetraen-1-yl)oxy)-6-(hydroxymethyl)tetrahydro-2H-pyran-3,4,5-triol		
SMILES	CC1(C)CCCC(C)=C1/C=C\C(C)=C\C=C\C(C)=C\CO[C@H]2[C@H](O)[C@@H](O)[C@H](O)[C@@H](CO)O2		
Formula	$C_{26}H_{40}O_6$	M.Wt	448.59
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Retinyl glucoside		

Background

Retinyl glucoside is a lipid glucoside and metabolite of Vitamin A [2] [3]. Glycosylation of vitamins exert various nutritional and metabolic effects [1].
As a product of in vitro enzymatic glycosylation, retinyl glucoside was hydrolyzed by two mammalian broad specificity β-glucosidases, the cytosolic and membrane-associated β-glucosidases of guinea pig liver [1] [2].
In vitamin A-deficient rats, retinyl β-glucose exhibited 67-100% of the growth-promoting, and was quickly hydrolyzed to retinol in metabolic studies [3].

References:

1. Gregory JF 3rd. Nutritional Properties and significance of vitamin glycosides. Annu Rev Nutr. 1998;18:277-96. Review. PubMed PMID: 9786648.

2. Vanderjagt DJ, Fry DE, Glew RH. Human glucocerebrosidase catalyses transglucosylation between glucocerebroside and retinol. Biochem J. 1994 Jun1;300 (Pt

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2):309-15. PubMed PMID: 8002933; PubMed Central PMCID: PMC1138163.
3. Barua AB, Olson JA. Chemical synthesis, growth-promoting activity, and metabolism of all-trans retinyl beta-glucose in the rat. Int J Vitam Nutr Res. 1992;62(4):298-302. PubMed PMID: 1291531.

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