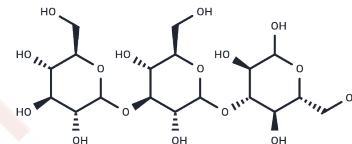


Laminaran

Chemical Properties

CAS No. :	9008-22-4
Formula:	C ₁₈ H ₃₂ O ₁₆
Molecular Weight:	504.438
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Laminaran is a β -1,3-glucan isolated from brown algae, often serving as a typical ligand for Dectin-1. It possesses anti-cancer, immune-modulating, and radiation-protective properties. Laminaran can be catalyzed by glucanase. In in vitro and in vivo experiments, Laminaran has demonstrated anti-tumor activity and may be used for severe cancers.
Targets(IC50)	Others,Endogenous Metabolite
In vitro	Laminaran (100-800 μ g / mL ; 24 h) had no cytotoxicity to normal epidermal cells JB6 Cl41 and human melanoma cells SK-MEL-28. After 15 hours of treatment, the inhibition percentage of the number of living cells was less than 24 % when the concentration was up to 800 μ g / mL [1]. Kelp glycan (200 μ g / mL ; 24-72 hours) did not induce any growth inhibition of SK-MEL-48 cells after treatment for 28 hours and 24 hours. However, it reduced cell proliferation by 72 % after 36 hours of treatment [1]. Low concentration of kelp glycan (25-50 μ g / mL ; 24 h) did not affect the phosphorylation of c-Raf (Ser259), ERK1 / 2 (Tyr202 / Tyr204) and MEK1 / 2 (Ser 221) kinases, as well as the total expression level of the studied proteins. However, it reduced p-MEK and p-ERK2 / 50 at 1 μ g / mL [1].
In vivo	Compared with PBS-, OVA-and kelp protein-treated mice, Laminaran (intravenous injection ; 12.5,25 and 50 mg / kg ; 21 days) and OVA (50 μ g) combination significantly reduced tumor mass [2].

Solubility Information

Solubility	H ₂ O: 29.41 mg/mL (58.3 mM),Sonication is recommended. DMSO: < 1 mg/mL (insoluble or slightly soluble),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.9824 mL	9.912 mL	19.824 mL
5 mM	0.3965 mL	1.9824 mL	3.9648 mL
10 mM	0.1982 mL	0.9912 mL	1.9824 mL
50 mM	0.0396 mL	0.1982 mL	0.3965 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Malyarenko OS, et al. Laminaran from brown alga Dictyota dichotoma and its sulfated derivative as radioprotectors and radiosensitizers in melanoma therapy. *Carbohydr Polym.* 2019 Feb 15;206:539-547.

Song K, et al. Laminarin promotes anti-cancer immunity by the maturation of dendritic cells. *Oncotarget.* 2017 Jun 13;8(24):38554-38567.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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