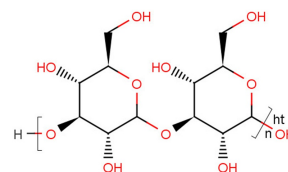


## Laminaran

## Chemical Properties

CAS No.:	9008-22-4
Formula:	N/A
Molecular Weight:	N/A
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



## Biological Description

Description	Laminaran is a promising immune stimulatory molecule for use in cancer immunotherapy. Laminaran is a neutral water-soluble $\beta$ -1-3-glucan and a typical ligand for Dectin-1 isolated from the brown alga <i>D. dichotoma</i> , has potent immunomodulating, radioprotective, and anticancer activities.
Targets(IC <sub>50</sub> )	Others: None
In vitro	Laminaran (25-50 $\mu$ g/mL; 24 hours) at low concentration does not effect the phosphorylation of c-Raf (Ser259), ERK1/2 (Tyr202/Tyr204), and MEK1/2 (Ser 221) kinases as well as the total expression level of investigated proteins. But decreases p-MEK, p-ERK1/2 at 50 $\mu$ g/mL. Laminaran (100-800 $\mu$ g/mL; 24 hours) is not cytotoxic against normal epidermal cells JB6 Cl41 and human melanoma cells SK-MEL-28, the percentage of inhibition of living cells number is less than 15 % at concentrations ranging up to 800 $\mu$ g/mL after 24 h of treatment. Laminaran (200 $\mu$ g/mL; 24-72 hours) does not induce any growth inhibition of SK-MEL-28 cells after 24 and 48 h of treatment but decreases cell proliferation by 36 % after 72 h of treatment [1].
In vivo	When it compares with the PBS-, OVA-, and laminarin-treated mice, Laminaran (i.v.; 12.5, 25, and 50 mg/kg; 21 days) and OVA (50 $\mu$ g) combination significantly reduces the tumor masses [3].

## Solubility Information

Solubility	DMSO: 100 mg/mL H <sub>2</sub> O: 100 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

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

Inhibitors · Natural Compounds · Compound Libraries

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