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Gagome-kombu fucoidan enhance systemic immunity and suppress tumor growth through activation of Peyer patches' cells.

ガゴメ昆布フコイダンは、パイエル板細胞の活性化を介して全身の免疫応答を亢進し、腫瘍増殖を抑制する。

We have reported last year that NK cells in mice play an important role in mediating anti-tumor effect of orally treated fucoidan from Gagome-Kombu (*Kjellmaniella crassifolia*). S-180-bearing mice were orally treated with or without Gagome-kombu fucoidan (Fd). The anti-tumor effect of oral Fd was evaluated by comparing the tumor volume of S-180-bearing mice with and without Fd. The tumor volume of S-180-bearing mice with oral Fd was suppressed dose-dependently. On the other hand, Peyer patches' cells were prepared from mice, which were administered 1% Fd-mixed food (about 1.5 g/kg/day) for 6 weeks and immunized with ovalbumin plus alum on day14 and day28. This Peyer patches' cells produced 2.3 times higher concentration of interferon- γ in the culture supernatant than control group without Fd when stimulated by ovalbumin (100 μ g/mL) for 3 days. These results suggest that anti-tumor activity of Fd might be mediated by the activation of Peyer patches' cells of intestine.