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NK cells in mice play an important role in mediating anti-tumor effect of orally treated fucoidan from Gagome-Kombu

ガゴメ昆布(*Kjellmaniella crassifolia*)由来フコイダンの経口投与による抗腫瘍作用には NK 細胞が重要である

S-180-bearing mice were orally treated with or without high-molecular-weight Gagome-kombu, *Kjellmaniella crassifolia* 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 found to be about 60% of the tumor volume of without Fd. With S-180-bearing mice, the NK activity of splenocytes, which was estimated by targeting YAC-1 cell, decreased to 13% from 23% of the healthy mice. However by feeding mice with Fd, the NK activity recovered to 17%.To elucidate the relationship between the anti-tumor activity of Fd and NK activity, we explored NK-cells depletion by injecting anti-asialo GM_1 antibody against NK cells intraperitoneally. NK-cells depletion resulted in the increment of the the tumor volume of Fd-treated mice from l,300 to 5,260 mm^3 (the tumor volume of untreated control mice: 3,600 mm^3) indicating that NK cells might be playing an important role in mediating the anti-tumor effect of the oral Fd treatment.