Polarchain Biotechnology Limited
Rm. 5, 5/F, TCL Tower
8 Tai Chung Road
Tsuen Wan
Hong Kong

本地大學實測 減少異細胞高達99%

Test Report No. R-CT26004

Date: 17/04/2026

Sample Description	:	**Fucoidan Liquid Type**
Sample Name	:	FU260211
Dosage Form	:	Liquid
Ingredient	:	-
Sample Appearance	:	Green liquid
Received Sample Condition	:	sample in sealed pack
HKIB sample No.	:	-
Batch No.	:	264
Expiry Date	:	11/02/2027
Job No.	:	ICT26003
Report Type	:	Liver Cancer Cell Line Test Breast Cancer Cell Line Test Colon Cancer Cell Line Test
Testing Period	:	02/2026- 04/2026

Please refer to the following page(s) for Test Requested, Test Method and Test Results

For and on behalf of
The Hong Kong Institute of Biotechnology Ltd.

Alan Yeung
General Manager
Chinese Medicine Department

微褐藻原液

- 壓抑異細胞分裂
- 誘導異細胞凋亡
- 抑制血管內皮生長因子(VEGF)的形成，從而抑制血管生成，切斷異細胞的營養和氧氣供應
- 激活免疫系統，增強自然殺手細胞和T細胞消滅異細胞的能力

微褐藻原液
5大成分互相配合 發揮標靶抗頑效能

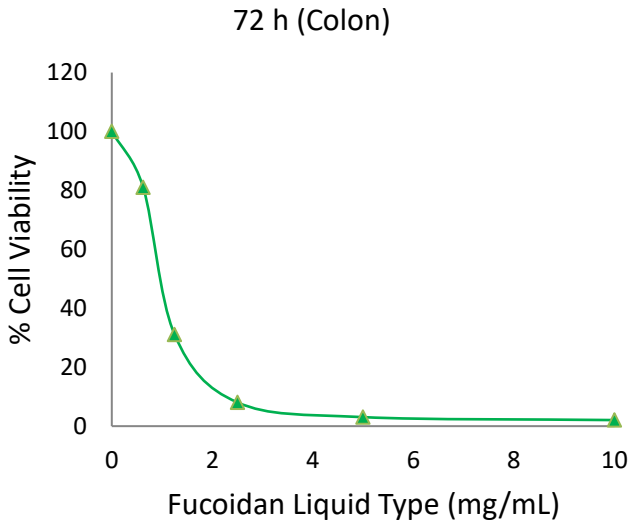
▶ 日本沖繩海蘊褐藻糖膠
→誘導異細胞凋亡

▶ 澳洲塔斯曼尼亞海域裙帶菜孢子葉糖膠
→抑制異細胞血管形成

▶ 澳洲塔斯曼尼亞海域墨角藻糖膠
→增強免疫系統

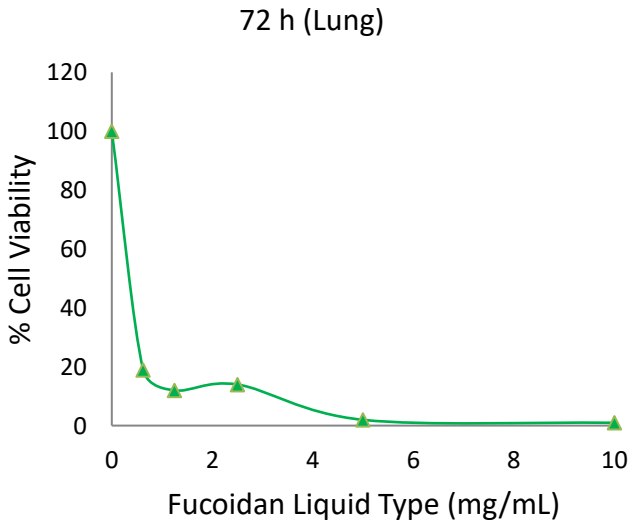
▶ 香港溫室微藻褐藻糖膠+岩藻黃素
→導入細胞，激發糖膠抗頑功效

本地大學異細胞測試



結腸異細胞

抑制率高達 98%

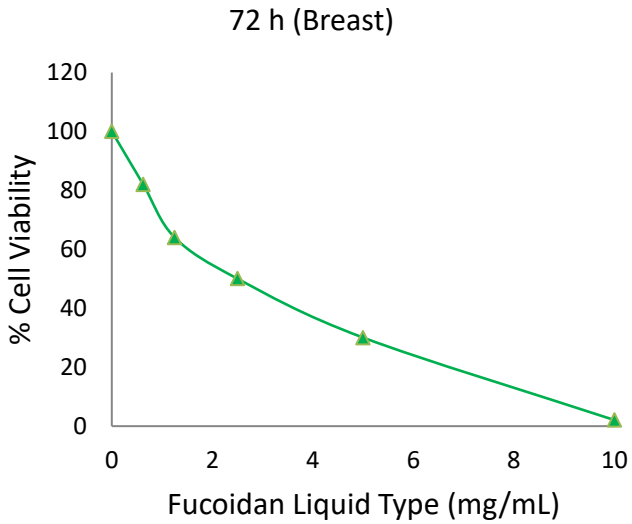


肺部異細胞

抑制率高達 99%

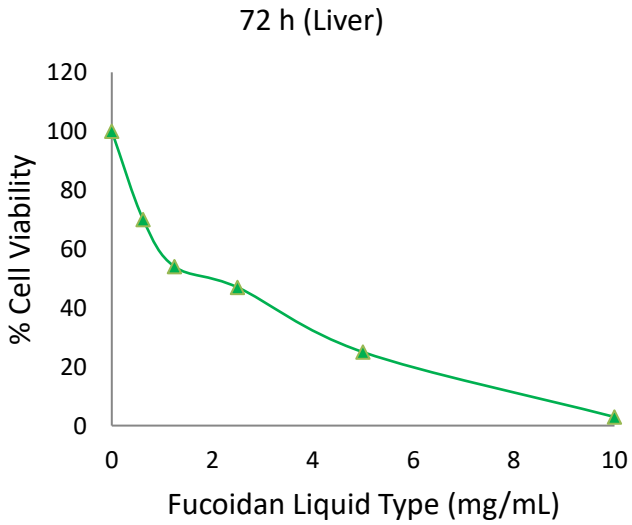
*實際數字或會因服用量及吸收率等因素而產生個體差異

本地大學異細胞測試



乳腺異細胞

抑制率高達 98%



肝臟異細胞

抑制率高達 97%

*實際數字或會因服用量及吸收率等因素而產生個體差異

Discussion

This study evaluated the inhibitory effects of Fucoidan on the proliferation of colon, liver, and breast cancer cell lines. The results clearly demonstrate that Fucoidan exhibited broad-spectrum antiproliferative activity across all tested cancer cell lines, with effects that were both dose- and time-dependent.

Among the three cancer types, colon cancer cells showed the highest sensitivity to Fucoidan, particularly after 72 h of treatment, with IC_{50} values as low as 1.018 mg/mL in CT26 cells. Liver cancer cells also showed consistent inhibition, although with slightly higher IC_{50} values at early time points. Notably, among breast cancer cells, the triple-negative BT-549-TNBC line exhibited the strongest response, with the IC_{50} of 0.680 mg/mL at 72 h, suggesting that this aggressive subtype may be particularly susceptible to Fucoidan treatment.

Overall, these findings confirm that Fucoidan possesses potent and broad antiproliferative effects against multiple cancer cell types. The variability in sensitivity across cell lines highlights the importance of cell-type specificity in its mechanism of action.

Discussion

EGFR (epidermal growth factor receptor) is a protein that plays an important role in regulating cell growth and division. It is a transmembrane receptor that is located on the surface of cells and is activated by binding with ligands such as epidermal growth factor (EGF). EGFR mutations are the most common oncogenic drivers in non-small-cell lung cancer (NSCLC), which are associated with cell sensitivity to EGFR tyrosine kinase inhibitors (TKIs) such as gefitinib and erlotinib. H1975, PC9, HCC4006, and HCC827 are all EGFR mutation NSCLC cell lines derived from patients, while A549 is an EGFR wild-type NSCLC cell line. The results revealed that Batch NO.259 Fucoidan Liquid Type can inhibit the proliferation of NSCLC cell lines, indicating that Batch NO.259 Fucoidan Liquid Type exerted more anti-proliferative effects on EGFR mutation NSCLC cell lines than on the EGFR wild-type NSCLC cell line A549.