Local University Cell Test Results : Abnormal Cells are suppressed up to 99%

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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

3+2 Unique Formula Fucoidan Liquid Type

- Suppress proliferation of abnormal cells
- Induce apoptosis of abnormal cells
- Inhibit the formation of vascular endothelial growth factor(VEGF), thereby suppressing the angiogenesis, cutting off the nutrient and oxygen supply for abnormal cells
- Activate natural killer cells and macrophages against abnormal cells

3+2 Unique Formula Fucoidan Liquid Type

▶ Mozuku, Okinawa, Japan

→Induce apoptosis of abnormal cells

▶ Mekabu, Tasmania, Australia

→Inhibit the formation of VEGF

▶ Bladder Wrack, Tasmania, Australia

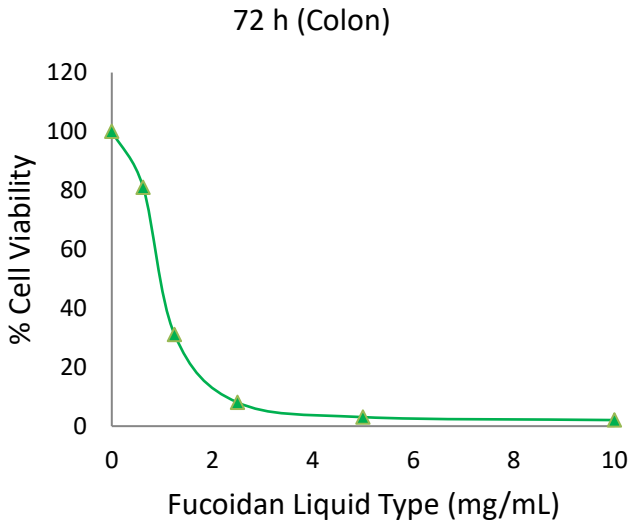
→Activate immune system

▶ Hong Kong Greenhouse Fucoidan & Fucoxanthin

→Protect healthy body cells

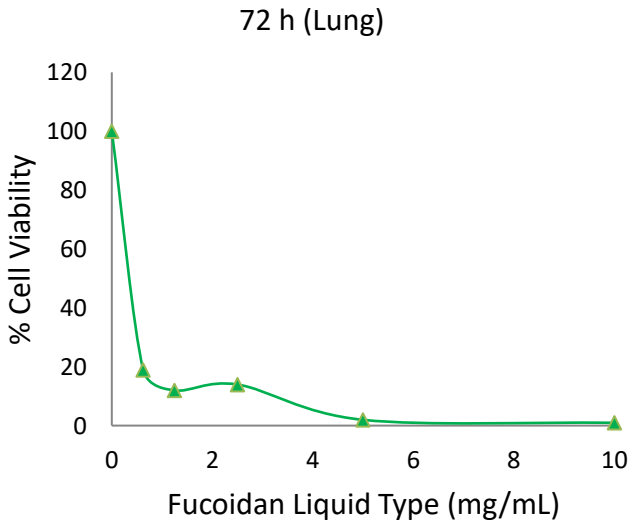
→Reduce formation of abnormal cells

Local University Cell Test Results



Colon abnormal cells

Suppressed up up to 98%

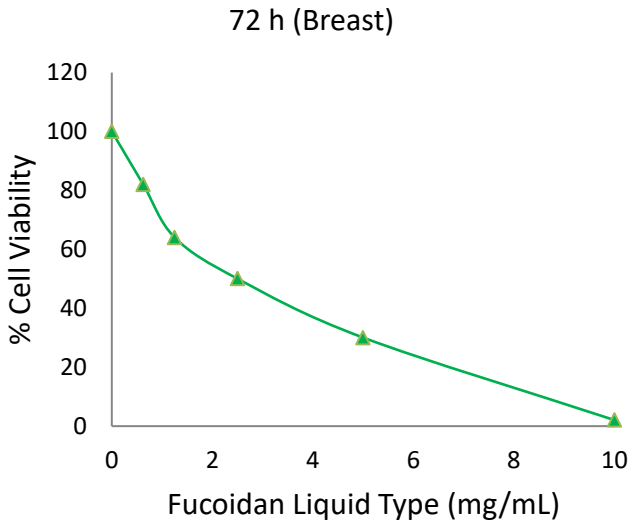


Lung abnormal cells

Suppressed up up to 99%

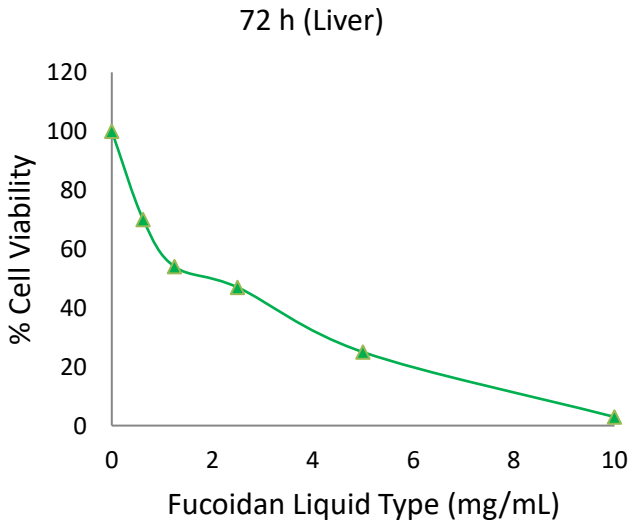
*Actual figures may vary among individuals due to factors such as dosage and absorption rate

Local University Cell Test Results



Breast abnormal cells

Suppressed up to 98%



Liver abnormal cells

Suppressed up to 97%

*Actual figures may vary among individuals due to factors such as dosage and absorption rate

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.