



# IROHA Indigo

The Extraordinary Power of Japanese Indigo

## Tryptanthrin: Active Component and Health Benefits

### Understanding Tryptanthrin's Therapeutic Effects

Scientists identified **tryptanthrin** as the key active compound in Japanese Indigo through research focused on isolating components from the plant's ethyl acetate extract. By tracking cytotoxic activity against cancer cells, researchers confirmed tryptanthrin as the primary agent responsible for the plant's medicinal properties.

Laboratory studies reveal that tryptanthrin demonstrates **potent cytotoxic effects** against various cancer cell types while showing **minimal harm to healthy cells**. This selective action represents a crucial advantage in developing safer therapeutic approaches.

In animal studies, oral tryptanthrin administration achieved **near-complete prevention** of small intestinal adenomas and colorectal cancer development. These findings highlight the potential of Indigo extract as an effective agent for **cancer chemoprevention**.

The ethyl acetate extract of Indigo—the same preparation used historically in Kampo medicine—contains tryptanthrin that has been shown to **inhibit proliferation** of human cancer cells and leukemia cells in laboratory cultures.

### Additional Therapeutic Properties

Beyond its anti-cancer effects, Japanese Indigo extract containing tryptanthrin shows promise for **antibacterial and antiviral applications**.

The plant's pigment component, **indigo** (indigoid/indirubin), supports mucosal membrane repair and is being investigated as a potential treatment for **ulcerative colitis** and other inflammatory bowel conditions.

### ⚠ Important Medical Disclaimer

The information presented here draws from **academic research and experimental studies** conducted by universities and research institutions, as well as **traditional knowledge** from Chinese and Kampo medical practices.

**If you are considering using Japanese Indigo or its extracts for cancer treatment, prevention, or any medical purpose, you must first consult with a qualified healthcare professional or medical specialist.**

This information is for educational purposes only and should not replace professional medical advice, diagnosis, or treatment.

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