

Compounds that suppress ferroptosis

Vitamin K and its derivative

Overview

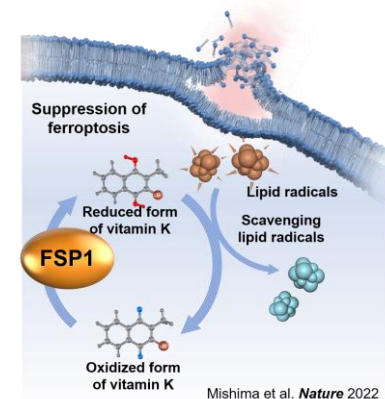
Ferroptosis is a form of regulated cell death associated with neurodegenerative diseases (e.g. Alzheimer's disease) and organ damage and is attracting attention as a therapeutic target. In this study, we found that vitamin K (especially the reduced form), a functional food ingredient, has a potent preventing effect on ferroptosis. Although a higher intake of vitamin K than those from the diet would be required to exert the anti-ferroptotic effect, vitamin K can be safely used even at high doses due to the no harmful effect reported. Thus, high-dose vitamin K supplementation is expected to be commercialized as a dietary supplement, functional food, and medicine.

Product Application

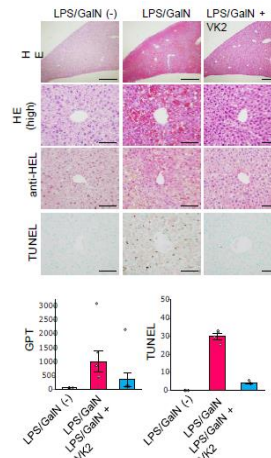
- ☐ Medicine
- ☐ Functional Foods

IP Data

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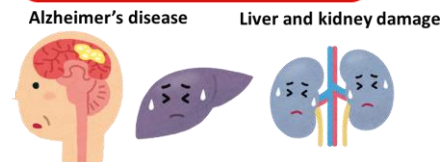
Features・Outstandings



Vitamin K2 inhibits cell death and reduces liver damage in hepatic injury model mice (20mg/kg orally administered)



High-dose supplementation of vitamin K may prevent ferroptosis-related diseases



Related Works

[1] <https://doi.org/10.1038/s41586-022-05022-3>
 Mishima et al. Nature 608 778–783(2022)

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