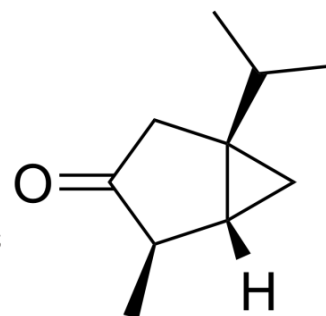


α-Thujone

Cat. No.:	HY-121618
CAS No.:	546-80-5
Molecular Formula:	C ₁₀ H ₁₆ O
Molecular Weight:	152.23
Target:	GABA Receptor; Reactive Oxygen Species; Parasite; Apoptosis; Autophagy
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Anti-infection; Apoptosis; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

α-Thujone is a monoterpene isolated from *Thuja occidentalis* essential oil with potent anti-tumor activities. α-Thujone is a reversible modulator of the GABA type A receptor and the IC₅₀ for α-Thujone is 21 μM in suppressing the GABA-induced currents. α-Thujone induces ROS accumulation-dependent cytotoxicity, also induces cell apoptosis and autophagy. α-Thujone has antinociceptive, insecticidal, and anthelmintic activity, and easily penetrates the blood-brain barrier^{[1][2][3]}.

REFERENCES

- [1]. Agus HH, et al. Involvement of Pca1 in ROS-mediated apoptotic cell death induced by alpha-thujone in the fission yeast (*Schizosaccharomyces pombe*). *FEMS Yeast Res.* 2020 Apr 29. pii: foaa022.
- [2]. Pudełek M, et al. Therapeutic potential of monoterpene α-thujone, the main compound of *Thuja occidentalis* L. essential oil, against malignant glioblastoma multiforme cells in vitro. *Fitoterapia.* 2019 Apr;134:172-181.
- [3]. Höld KM, et al. Alpha-thujone (the active component of absinthe): gamma-aminobutyric acid type A receptor modulation and metabolic detoxification. *Proc Natl Acad Sci U S A.* 2000 Apr 11;97(8):3826-31.

Caution: Product has not been fully validated for medical applications. For research use only.

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