

# Alpinumisoflavone

Alpinumisoflavone (AIF) is a flavonoid compound isolated from *Derris eriocarpa*.

A study aimed to examine the role of Alpinumisoflavone in [glioblastoma](#).

The results showed that AIF could decrease the cell viability of both T98G and U373 Glioblastoma cell lines. AIF treatment also caused cell cycle arrest at G1/G0 phase along with upregulation of p27 and downregulation of cyclin D1. AIF could significantly induce apoptosis in Glioblastoma cells. Activation of caspase-9, disruption of mitochondrial membrane potential and loss of mitochondrial cytochrome C were also observed following AIF treatment. Inhibition of glycolysis by AIF was demonstrated by reducing glucose consumption and lactate output in Glioblastoma cells. Moreover, HK2 was identified as the molecular target responsible for the anti-cancer activities of AIF against Glioblastoma cells. The results showed that HK2 knockdown enhanced the anti-cancer activities of AIF while ectopic HK2 expression compromised its effect. Furthermore, the anti-neoplastic activities of AIF in vivo were also validated in xenograft murine model. Our results showed that AIF can exhibit anti-cancer activities in Glioblastoma by promoting apoptosis and inhibiting glycolysis via targeting HK2 <sup>1)</sup>.

<sup>1)</sup>

Zhao X, Zhang T, Jiang K, Gao H. Alpinumisoflavone Exhibits Anti-cancer Activities in Glioblastoma Multiforme by Suppressing Glycolysis. *Anat Rec (Hoboken)*. 2019 Aug 24. doi: 10.1002/ar.24242. [Epub ahead of print] PubMed PMID: 31444982.

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