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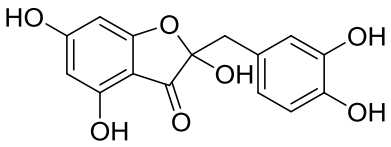
PRODUCT DATA SHEET

Alphitonin

Code No.: **BIA-A1767**

Pack sizes: **1 mg, 5 mg**



Synonyms :

Specifications

CAS #	:	**493-36-7**
Molecular Formula	:	**$C_{15}H_{12}O_7$**
Molecular Weight	:	**304.3**
Source	:	***Alphitonia excelsa***
Appearance	:	**Beige solid**
Purity	:	**>95% by HPLC**
Long Term Storage	:	**-20°C**
Solubility	:	**Soluble in ethanol, methanol, DMF or DMSO.**

Application Notes

Alphitonin is a flavonoid-related metabolite related to quercetin isolated from the heartwood of the Australian red ash, Alphitonia excela in 1922. Alphitonin's structure was reported by Birch and Ritchie in 1960. Alphitonin is thermally and enzymically converted from the flavonoid, taxifolin. Alphitonin has antidiabetic and antioxidant properties, being more active than quercetin. In contrast, alphitonin did not inhibit TNF responses in a murine small intestinal epithelial cell line, suggesting that microbial transformation of quercetin completely abolished the latter's anti-inflammatory effect.

References

1. The glucoside occurring in the timber of the red ash, Alphitonia excelsa. Smith H.G. & Read J., J. Proc. Roy. Soc NSW 1922, 56, 253.
2. The structure of alphitonin. Birch A.J. et al., J. Chem. Soc. 1960, 3593.
3. Further constituents of Alphitonia species. Guise G.B. et al., Aust. J Chem. 1962, 15, 314.
4. Plasma-induced degradation of quercetin associated with the enhancement of biological activities. Kim T.H. et al., J. Agric. Food Chem. 2017, 65, 6929.
5. Quercetin inhibits TNF-induced NF-kappaB transcription factor recruitment to proinflammatory gene promoters in murine intestinal epithelial cells. Ruiz P.A. et al., J. Nutr. 2007, 137, 1208.

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