

# PRODUCT INFORMATION



## Afzelin

Item No. 31135

**CAS Registry No.:** 482-39-3  
**Formal Name:** 3-[[6-deoxy- $\alpha$ -L-mannopyranosyl]oxy]-5,7-dihydroxy-2-(4-hydroxyphenyl)-4H-1-benzopyran-4-one

**Synonyms:** Kaempferin, Kaempferol 3-O-rhamnoside, Kaempferol 3-O- $\alpha$ -L-rhamnopyranoside

**MF:** C<sub>21</sub>H<sub>20</sub>O<sub>10</sub>

**FW:** 432.4

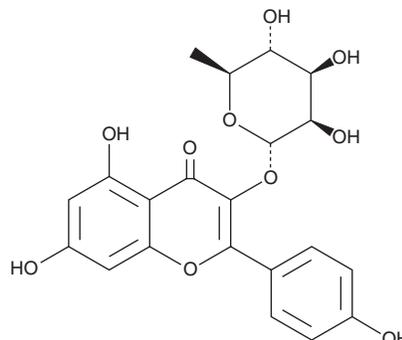
**Purity:**  $\geq$ 95%

**Supplied as:** A solid

**Storage:** -20°C

**Stability:**  $\geq$ 4 years

**Item Origin:** Plant/*Cyclocarya paliurus*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Afzelin is supplied as a solid. A stock solution may be made by dissolving the afzelin in the solvent of choice, which should be purged with an inert gas. Afzelin is soluble in methanol.

### Description

Afzelin is a polyphenolic glycoside flavone that has been found in *B. pinnatum* and has diverse biological activities.<sup>1-3</sup> It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals with an IC<sub>50</sub> value of 6.44  $\mu$ g/ml.<sup>1</sup> Afzelin is active against *S. aureus*, *P. aeruginosa*, *S. typhi*, *C. albicans*, *C. parapsilosis*, and *C. neoformans* (MICs = 8, 16, 2, 16, 4, and 4  $\mu$ g/ml, respectively). It inhibits the proliferation of A549, SKOV3, and SK-MEL-2 cells (EC<sub>50</sub>s = 40.6, 34.5, and 33.9  $\mu$ g/ml, respectively).<sup>2</sup> Afzelin (26 mg/kg per day) reduces the number of eosinophils, other inflammatory cells, and total cells, as well as the levels of IL-4, IL-5, and IL-13, in bronchoalveolar lavage fluid (BALF) in a mouse model of allergic asthma.<sup>3</sup>

### References

1. Tatsimo, S.J.N., Tamokou, J.d.D., Havyarimana, L., *et al.* Antimicrobial and antioxidant activity of kaempferol rhamnoside derivatives from *Bryophyllum pinnatum*. *BMC Res. Notes* **5**, 158 (2012).
2. Kim, Y.-K., Kim, Y.S., Choi, S.U., *et al.* Isolation of flavonol rhamnosides from *Loranthus tanakae* and cytotoxic effect of them on human tumor cell lines. *Arch. Pharm. Res.* **27(1)**, 44-47 (2004).
3. Chung, M.J., Pandey, R.P., Choi, J.W., *et al.* Inhibitory effects of kaempferol-3-O-rhamnoside on ovalbumin-induced lung inflammation in a mouse model of allergic asthma. *Int. Immunopharmacol.* **25(2)**, 302-310 (2015).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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