

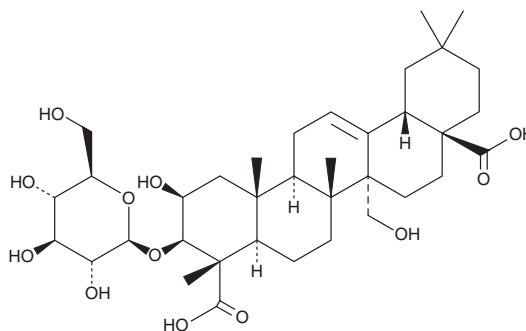
# PRODUCT INFORMATION



## Tenuifolin

Item No. 30617

**CAS Registry No.:** 20183-47-5  
**Formal Name:** (4 $\alpha$ )-3 $\beta$ -( $\beta$ -D-glucopyranosyloxy)-2 $\beta$ ,27-dihydroxy-olean-12-ene-23,28-dioic acid  
**Synonym:** Presenegenin 3-O-glucoside  
**MF:** C<sub>36</sub>H<sub>56</sub>O<sub>12</sub>  
**FW:** 680.8  
**Purity:**  $\geq$ 95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Plant/*Polygalae* radix



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

### Laboratory Procedures

Tenuifolin is supplied as a crystalline solid. A stock solution may be made by dissolving the tenuifolin in the solvent of choice, which should be purged with an inert gas. Tenuifolin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of tenuifolin in these solvents is approximately 30 mg/ml.

Tenuifolin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tenuifolin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Tenuifolin has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Tenuifolin is a saponin that has been found in *P. tenuifolia* and has neuroprotective activity.<sup>1,2</sup> It inhibits  $\beta$ -secretase (BACE) activity by 54.4% when used at a concentration of 10  $\mu$ g/ml.<sup>2</sup> Tenuifolin (2  $\mu$ g/ml) inhibits secretion of amyloid- $\beta$  (1-40) (A $\beta$ 40) and A $\beta$ 42 from COS-7 cells expressing wild-type amyloid precursor protein isoform 695 (APP695 WT) or Swedish mutant APP695 (APP695 Swe). It prevents decreases in PC12 cell viability induced by A $\beta$  (25-35) when used at concentrations of 20 and 40  $\mu$ g/L.<sup>1</sup> Tenuifolin (3 and 9 mg/kg) inhibits increases in the escape latency and total swimming distance induced by A $\beta$  (25-35) in the Morris water maze in mice.

### References

1. Liu, Y.-m., Li, Z.-y., Hu, H., et al. Tenuifolin, a secondary saponin from hydrolysates of polygalasaponins, counteracts the neurotoxicity induced by A $\beta$ <sub>25-35</sub> peptides in vitro and in vivo. *Pharmacol. Biochem. Behav.* **128**, 14-22 (2015).
2. Lv, J., Jiang, Y., Ruan, Y., et al. Tenuifolin, an extract derived from *tenuigenin*, inhibits amyloid- $\beta$  secretion in vitro. *Acta Physiol. (Oxf.)* **196**(4), 419-425 (2009).

#### 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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