

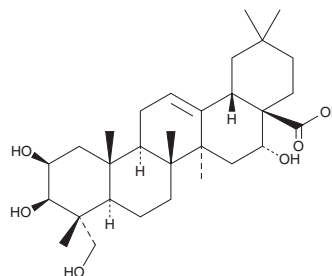
# PRODUCT INFORMATION



## Polygalacic Acid

Item No. 30620

**CAS Registry No.:** 22338-71-2  
**Formal Name:** (2 $\beta$ ,3 $\beta$ ,4 $\alpha$ ,16 $\alpha$ )-2,3,16,23-tetrahydroxy-olean-12-en-28-oic acid  
**Synonym:** Virgaureagenin G  
**MF:** C<sub>30</sub>H<sub>48</sub>O<sub>6</sub>  
**FW:** 504.7  
**Purity:**  $\geq$ 95%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Synthetic



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

### Laboratory Procedures

Polygalacic acid is supplied as a solid. A stock solution may be made by dissolving the polygalacic acid in the solvent of choice, which should be purged with an inert gas. Polygalacic acid is soluble in the organic solvent ethanol at a concentration of approximately 10 mg/ml.

### Description

Polygalacic acid is a triterpenoid saponin that has been found in *P. grandiflorum* with antioxidant and neuroprotective activities.<sup>1-3</sup> It scavenges peroxy and peroxy nitrite radicals in total oxidant-scavenging capacity (TOSC) assays when used at concentrations ranging from 25 to 200  $\mu$ M.<sup>2</sup> Polygalacic acid (3, 6, and 12 mg/kg) reverses scopolamine-induced increases in escape latency and decreases in the time spent in the target quadrant of the Morris water maze, decreases in hippocampal acetylcholine (ACh) levels, increases in hippocampal IL-1 $\beta$  and IL-10 levels, and decreases in brain superoxide dismutase (SOD) and glutathione (GSH) levels in mice.<sup>3</sup>

### References

1. Kubota, T., and Kitatani, H. Revised structure of the triterpene polygalacic acid: Configuration of the C-16 hydroxy-group. *Chem. Commun. (Lond.)* **16**, 1005-1006 (1968).
2. Ryu, C.S., Kim, C.H., Lee, S.Y., et al. Evaluation of the total oxidant scavenging capacity of saponins isolated from *Platycodon grandiflorum*. *Food Chem.* **132(1)**, 333-337 (2012).
3. Guo, C., Shen, J., Meng, Z., et al. Neuroprotective effects of polygalacic acid on scopolamine-induced memory deficits in mice. *Phytomedicine* **23(2)**, 149-155 (2016).

#### 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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