

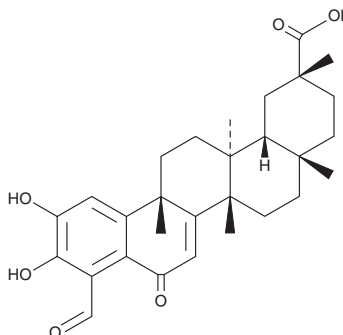
# PRODUCT INFORMATION



## Demethylzeylasteral

Item No. 28595

**CAS Registry No.:** 107316-88-1  
**Formal Name:** (9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,20 $\alpha$ )-2,3-dihydroxy-9,13-dimethyl-6,23-dioxo-24,25,26-trinoroleana-1,3,5(10),7-tetraen-29-oic acid  
**MF:** C<sub>29</sub>H<sub>36</sub>O<sub>6</sub>  
**FW:** 480.6  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\max}$ : 214, 269, 308, 371 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Plant/*Tripterygium wilfordii* Hook F



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

### Laboratory Procedures

Demethylzeylasteral is supplied as a crystalline solid. A stock solution may be made by dissolving the demethylzeylasteral in the solvent of choice, which should be purged with an inert gas. Demethylzeylasteral is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of demethylzeylasteral in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Demethylzeylasteral is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, demethylzeylasteral should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Demethylzeylasteral has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Demethylzeylasteral is a nortriterpenoid originally isolated from *T. wilfordii* that has diverse biological activities, including enzyme inhibitory, anti-angiogenic, antiproliferative, anti-inflammatory, and immunosuppressive properties.<sup>1-4</sup> Demethylzeylasteral inhibits the UDP-glucuronosyltransferase (UGT) isoforms UGT1A6 and UGT2B7 ( $K_{iS}$  = 0.6 and 17.3  $\mu$ M, respectively).<sup>2</sup> It inhibits growth of bovine aortic endothelial cells (BAEs) and U251 human glioma cancer cells *in vitro* ( $IC_{50S}$  = 0.21 and  $\sim$ 6.2  $\mu$ M, respectively), as well as inhibits tumor growth and neovascularization *in vivo* in a B16/F10 melanoma mouse allograft model when administered at a dose of 30 mg/kg per day.<sup>1</sup> Demethylzeylasteral (0.12 mg/kg per day) decreases renal proteinuria, lesions, immune cell infiltration, and protein levels of TNF- $\alpha$ , COX-2, and ICAM-1 in lupus-prone MRL/*lpr* mice.<sup>3</sup> Demethylzeylasteral (10 mg/kg per day) also increases survival of recipient rats in a model of kidney transplant.<sup>4</sup>

### References

1. Ushiro, S., Ono, M., Nakayama, J., et al. *Int. J. Cancer* **72(4)**, 657-663 (1997).
2. Zhao, J.-W., Wang, G.-H., Chen, M., et al. *Molecules* **17(8)**, 9469-9475 (2012).
3. Hu, Q., Yang, C., Wang, Q., et al. *PLoS One* **10(7)**, e0133724 (2015).
4. Xu, W., Lin, Z., Yang, C., et al. *Int. Immunopharmacol.* **9(7-8)**, 996-1001 (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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