

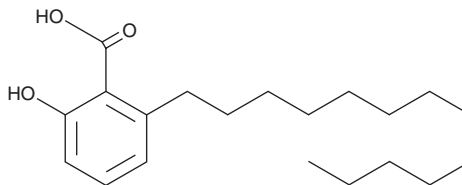
# PRODUCT INFORMATION



## Ginkgoneolic Acid

Item No. 27656

CAS Registry No.: 20261-38-5  
Formal Name: 2-hydroxy-6-tridecyl-benzoic acid  
Synonyms: Anacardic Acid A, Ginkgolic Acid C13:0  
MF:  $C_{20}H_{32}O_3$   
FW: 320.5  
Purity:  $\geq 95\%$   
Supplied as: A crystalline solid  
Storage:  $-20^{\circ}\text{C}$   
Stability:  $\geq 2$  years  
Item Origin: Plant/*Ginkgo biloba*



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

### Laboratory Procedures

Ginkgoneolic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the ginkgoneolic acid in the solvent of choice, which should be purged with an inert gas. Ginkgoneolic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ginkgoneolic acid in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

### Description

Ginkgoneolic acid is an anacardic acid and analog of anacardic acid monoene (Item No. 18422) originally isolated from *G. biloba* and has diverse biological activities.<sup>1-4</sup> It inhibits glycerol-3-phosphate dehydrogenase (GPDH;  $IC_{50} = 3 \mu\text{g/ml}$ ).<sup>1</sup> Ginkgoneolic acid inhibits PI3K $\delta$  ( $IC_{50} = 2.49 \mu\text{M}$ ) and IgE-mediated RBL-2H3 mast cell degranulation *in vitro* ( $IC_{50} = 2.4 \mu\text{M}$ ).<sup>2</sup> It reduces *S. mutans* biofilm formation with a 50% biofilm inhibition concentration (MBIC<sub>50</sub>) value of  $4 \mu\text{g/ml}$ .<sup>3</sup> Ginkgoneolic acid is molluscicidal against *O. hupensis* when used at a concentration of 2 mg/L.<sup>4</sup>

### References

1. Irie, J., Murata, M., and Homma, S. Glycerol-3-phosphate dehydrogenase inhibitors, anacardic acids, from *Ginkgo biloba*. *Biosci. Biotechnol. Biochem.* **60**(2), 240-243 (1996).
2. Guo, J.-F., Ning, Z.-Q., Wu, X., et al. Discovery of a natural PI3K $\delta$  inhibitor through virtual screening and biological assay study. *Biochem. Biophys. Res. Commun.* **508**(3), 709-714 (2019).
3. He, J., Wang, S., Wu, T., et al. Effects of ginkgoneolic acid on the growth, acidogenicity, adherence, and biofilm of *Streptococcus mutans* in vitro. *Folia Microbiol. (Praha)* **58**(2), 147-153 (2013).
4. Yang, X.-m., Chen, S.-x., Xia, L., et al. Molluscicidal activity against *Oncomelania hupensis* of *Ginkgo biloba*. *Fitoterapia* **79**(4), 250-254 (2008).

#### 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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