# **PRODUCT** INFORMATION



## Garcinoic Acid

Item No. 28122

CAS Registry No.:	91893-83-3	
Formal Name:	(2E,6E,10E)-13-[(2R)-3,4-dihydro-	
	6-hydroxy-2,8-dimethyl-2H-1-	
	benzopyran-2-yl]-2,6,10-trimethyl-	
	2,6,10-tridecatrienoic acid	
Synonyms:	δ-Garcinoic Acid,	
	δ-trans-Tocotrienoloic Acid	ОН
MF:	$C_{27}H_{38}O_{4}$	
FW:	426.6	HO
Purity:	≥98%	
Supplied as:	A film	
Storage:	-20°C	
Stability:	≥1 year	
Item Origin:	Plant/Garcinia kola nut	
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Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

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

Garcinoic acid is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, garcinoic acid should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Garcinoic acid 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

Garcinoic acid is a derivative of vitamin E originally isolated from C. grandiflora.<sup>1</sup> It inhibits IL-1β-induced microsomal prostaglandin E2 synthase-1 (mPGES-1) activity in A549 cells when used at concentrations of 1 and 10  $\mu$ M.<sup>2</sup> It has higher antioxidant activity relative to (±)- $\alpha$ -tocopherol (Item No. 25985) in a cell-free assay when used at a concentration of 0.15 mM.<sup>3</sup>

#### References

- 1. Monache, F.D., Marta, M., Mac-Quhae, M.M., et al. Two new tocotrienoloic acids from the fruits of Clusia grandiflora Splith. Gazz. Chim. Ital. 114(3-4), 135-137 (1984).
- 2. Alsabil, K., Suor-Cherer, S., Koeberle, A., et al. Semisynthetic and natural garcinoic acid isoforms as new mPGES-1 inhibitors. Planta Med. 82(11-12), 1110-1116 (2016).
- 3. Terashima, K., Takaya, Y., and Niwa, M. Powerful antioxidative agents based on garcinoic acid from Garcinia kola. Bioorg. Med. Chem. 10(5), 1619-1625 (2002).

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

#### SAFETY DATA

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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