

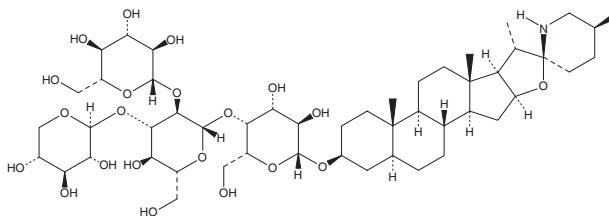
PRODUCT INFORMATION



Tomatine

Item No. 16024

CAS Registry No.: 17406-45-0
Formal Name: (3 β ,5 α ,22 β ,25S)-spirosolan-3-yl
O- β -D-glucopyranosyl-(1 \rightarrow 2)-O-
[β -D-xylopyranosyl-(1 \rightarrow 3)]-O-
 β -D-glucopyranosyl-(1 \rightarrow 4)- β -D-
galactopyranoside
Synonyms: Lycopersicin, NSC 9223, NSC 234440,
 α -Tomatine
MF: C₅₀H₈₃NO₂₁
FW: 1,034.2
Purity: \geq 95%
Supplied as: A solid
Storage: -20°C
Stability: \geq 2 years
Item Origin: Plant/Tomato



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

Laboratory Procedures

Tomatine is supplied as a solid. A stock solution may be made by dissolving the tomatine in the solvent of choice, which should be purged with an inert gas. Tomatine is soluble in the organic solvent DMSO at a concentration of approximately 2 mg/ml.

Description

Tomatine is a steroidal saponin that has been found in *S. lycopersicum* and has diverse biological activities.¹⁻⁴ It is active against a panel of 19 plant pathogenic fungi (EC₅₀s = 13-912 μ M) and inhibits the growth of *L. amazonensis* promastigotes (IC₅₀ = 124 nM).^{1,2} Tomatine (0.75, 1, and 1.5 μ M) inhibits autophagy and induces apoptosis in SKOV3 ovarian cancer cells.³ Dietary administration of tomatine (0.1 and 0.2% w/w) decreases serum LDL levels and increases fecal cholesterol secretion in hamsters.⁴

References

1. Sandrock, R.W. and Vanetten, H.D. Fungal sensitivity to and enzymatic degradation of the phytoanticipin α -tomatine. *Phytopathology* **88**(2), 137-143 (1998).
2. Friedman, M. Anticarcinogenic, cardioprotective, and other health benefits of tomato compounds lycopene, α -tomatine, and tomatidine in pure form and in fresh and processed tomatoes. *J. Agric. Food Chem.* **61**(40), 9534-9550 (2013).
3. Wu, H., Li, W., Wang, T., et al. α -Tomatine, a novel early-stage autophagy inhibitor, inhibits autophagy to enhance apoptosis via Beclin-1 in Skov3 cells. *Fitoterapia* **152**, 104911 (2021).
4. Friedman, M., Fitch, T.E., and Yokoyama, W.E. Lowering of plasma LDL cholesterol in hamsters by the tomato glycoalkaloid tomatine. *Food Chem. Toxicol.* **38**(7), 549-553 (2000).

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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