

Tomatidine Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Tomatidine

Catalog No.: CFN90632

Cas No.: 77-59-8

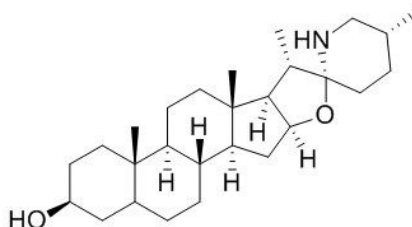
Purity: > 98%

M.F: C₂₇H₄₅NO₂

M.W: 415.65

Physical Description: Powder

Synonyms: 22S,25S,5Alpha-tomatanin-3beta-ol; Spirosolan-3-ol-(3beta,5alpha,22beta,25alpha).



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Others.

[Source]

The fruits of *Lycopersicon esculentum* Mill.

[Biological Activity or Inhibitors]

Tomatidine, a tomato sapogenol, ameliorates hyperlipidemia and atherosclerosis in ApoE-deficient mice by inhibiting Acyl-CoA:cholesterol Acyl-transferase (ACAT).^[1]

Tomatidine and lycotetraose, hydrolysis products of alpha-tomatine by *Fusarium oxysporum* tomatinase, suppress induced defense responses in tomato cells.^[2]

Tomatidine acts as an anti-inflammatory agent by blocking NF- κ B and JNK signaling, and may possibly be developed as a useful agent for the chemoprevention of cancer or inflammatory diseases.^[3]

Tomatidine can inhibit replication of *Staphylococcus aureus* small-colony variants in cystic fibrosis airway epithelial cells, it eventually will find some use in combination therapy with other traditional antibiotics to eliminate persistent forms of *S. aureus*.^[4]

Tomatidine can inhibit invasion of human lung adenocarcinoma cell A549 by reducing matrix metalloproteinases expression, it also inhibits ERK and Akt signaling pathways and NF- κ B activity, demonstrates that a new therapeutic potential for tomatidine in anti-metastatic therapy.^[5]

Tomatidine can promote the inhibition of 24-alkylated sterol biosynthesis and mitochondrial dysfunction in *Leishmania amazonensis* promastigotes.^[6]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[7]

Mobile phase: Tetrahydrofuran-Water-Acetonitrile-Acetic acid=50:30:20:1;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 205 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Fujiwara Y, Kiyota N, Tsurushima K, *et al. J.Agr. Food Chem.*, 2012, 60(10):2472-9.
- [2] Ito S I, Eto T, Tanaka S, *et al. Febs Lett.*, 2004, 571(1-3):31-4.
- [3] Chiu F L, Lin J K. *Febs Lett.*, 2008, 582(16):2407-12.
- [4] Mitchell G, Gattuso M, Grondin G, *et al. Antimicrob. Agents Ch.*, 2011, 55(5):1937-45.
- [5] Kun-Huang Y, Liang-Ming L, Shao-Han Y, *et al. Chem.-Biol. Int.*, 2013, 203(3):580-7.
- [6] Medina J M, Rodrigues J C F, De Souza W, *et al. Parasitology*, 2012, 139(10):1253-65.
- [7] Bushway R J, Perkins L B, Paradis L R, *et al. J.Agr. Food Chem.*, 1994, 42(12):2824-9.

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