[ Product Information ]

Name: Silymarin
Catalog No.: CFN99542
Cas No.: 22888-70-6
Purity: > 98%
M.F: C_{25}H_{22}O_{10}
M.W: 482.46

Physical Description: White powder

Synonyms: (2R,3R)-3,5,7-trihydroxy-2-[(2R,3R)-3-(4-hydroxy-3-methoxyphenyl)-2-(hydroxy methyl)-2,3-dihydro-1,4-benzodioxin-6-yl]-3,4-dihydro-2H-1-benzopyran-4-one.

[ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food and cosmetic research;
4. Synthetic precursor compounds;
5. Intermediates & Fine Chemicals;
6. Ingredient in supplements, beverages;
7. Care and daily chemicals;
8. Others.

[ Source ]
The herb of *Silybum marianum* (L.) Gaertn.

[**Biological Activity or Inhibitors**]

Silymarin (SIL), a standardized plant extract containing about 60% polyphenole silibinin, is used as a hepatoprotective agent, it retards collagen accumulation in early and advanced biliary fibrosis secondary to complete bile duct obliteration in rats, it also may play a role in the therapy of (alcoholic) liver cirrhosis.\(^{[1,2]}\)

Silymarin modulates imbalance between cell survival and apoptosis through interference with the expressions of cell cycle regulators and proteins involved in apoptosis; it also shows anti-inflammatory as well as anti-metastatic activity; it has the protective effects in various tissues, suggest a clinical application in cancer patients as an adjunct to established therapies, to prevent or reduce chemotherapy as well as radiotherapy-induced toxicity.\(^{[3]}\)

Silymarin possesses antioxidant, anti-inflammatory and immunomodulatory properties which may lead to the prevention of skin cancer in in vivo animal models, suggests that it is a promising chemopreventive and pharmacologically safe agent which can be exploited or tested against skin cancer in human system, moreover, it may favorably supplement sunscreen protection and provide additional anti-photocarcinogenic protection.\(^{[4]}\)

Silymarin induces apoptosis primarily through a p53-dependent pathway involving Bcl-2/Bax, cytochrome c release, and caspase activation.\(^{[5]}\)

Silymarin and silibinin cause G1 and G2–M cell cycle arrest via distinct circuitries in human prostate cancer PC3 cells.\(^{[6]}\)

[**Solvent**]

Chloroform, Dichloromethane, DMSO, Acetone.

[**HPLC Method**]\(^{[7]}\)

Mobile phase: Methanol- Acetonitrile-0.05 M KH\(_2\)PO\(_4\) (adjusted at pH 2.3), gradient elution ;
Flow rate: 1.0 ml/min;
Column temperature: 30 °C;
The wave length of determination: 288 nm.

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

[ References ]

[ Contact ]
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