Natural Products

ChemFaces

4-Methylumbelliferone Datasheet

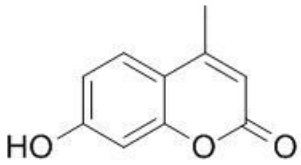
4th Edition (Revised in July, 2016)

[Product Information]

Name: 4-Methylumbelliferone

Catalog No.: CFN90421

Cas No.: 90-33-5



Purity: >=98%

M.F: $C_{10}H_8O_3$

M.W: 176.17

Physical Description: Powder

Synonyms: 7-Hydroxy-4-methylcoumarin;7-Hydroxy-4-methyl-2-oxo-3-chromene; Bilicante; beta-methylumbelliferone; Cantabilin.

[Intended Use]

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

[Source]

The herbs of *Ruta graveolens L.*

[Biological Activity or Inhibitors]

4-Methylumbelliferone (MU) inhibits the cell surface hyaluronan (HA) formation, and that such inhibition results in suppression of adhesion and locomotion of cultured melanoma cells, MU-treated melanoma cells shows both decreased cell surface HA formation and suppression of liver metastasis after injection into the mice, thus, both cell surface HA of melanoma cells and recipient liver HA can promote liver metastasis, indicating that MU has potential as an anti-metastatic agent.[1]

A combination of 4-methylumbelliferone and gemcitabine is effective against human pancreatic cancer cells, 4-methylumbelliferone may have potential as a chemosensitizer and may provide us with a new anticancer strategy.[2]

[Solvent]

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

[HPLC Method][3]

Mobile phase: 0.03% Trifluoroacetic acid in methanol- 0.01% Trifluoroacetic acid in water,gradient elution ;

Flow rate: 0.7 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 349 nm.

[Storage]

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

[References]

[1] Yoshihara S, Kon A, Kudo D, *et al. FEBS Letters, 2005, 579(12):2722–6.*

[2] Nakazawa H, Yoshihara S, Kudo D, *et al. Cancer Chemoth. Pharm., 2006, 57(2): 165-70.*

[3] Shimoi K, Saka N, Nozawa R, *et al. Drug Metab. Dispos., 2002, 29(12):1521-4.*

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