[ Product Information ]

Name: Wedelolactone
Catalog No.: CFN98857
Cas No.: 524-12-9
Purity: >95%
M.F: C_{16}H_{10}O_{7}
M.W: 314.25

Physical Description: Yellow powder

Synonyms: 1,8,9-Trihydroxy-3-methoxy-6H-benzofuro[3,2-c][1]benzopyran-6-one;
6H-Benzofuro(3,2-C)(1)benzopyran-6-one, 1,8,9-trihydroxy-3-methoxy-;
5,11,12-Trihydroxy-7-MethoxycouMestan.

[ Intended Use ]

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

[ Source ]

The herbs of *Eclipta prostrata.*
**Biological Activity or Inhibitors**

Wedelolactone, a natural compound that inhibits LPS-induced caspase-11 expression in cultured cells by inhibiting NF-kappaB-mediated transcription, it is an inhibitor of IKK, a kinase critical for activation of NF-kappaB by mediating phosphorylation and degradation of IkappaBalpha.\[1\]

Wedelolactone, para-bromophenacyl bromide and heparin are antagonists of these two phospholipase A2 myotoxins, and that antagonism by the first two compounds may be due to a more specific interaction with these proteins than that by the latter.\[2\]

Wedelolactone is a potent \(\beta\)-arrestin-biased G protein-coupled receptor-35 (GPR35) agonist, GPR35 has been shown to be a target of the asthma drugs cromolyn disodium and nedocromil sodium, suggests that certain anti-inflammatory phytochemicals including gallic acid and wedelolactone may modulate inflammatory allergic action via their agonism at GPR35, GPR35 may represent a target for the treatment of allergic disorders including asthma.\[3\]

Wedelolactone inhibits adipogenic differentiation through ERK pathway and suggest a novel inhibitory effect of wedelolactone on adipogenic differentiation in human adipose tissue-derived mesenchymal stem cells (hAMSCs).\[4\]

Wedelolactone selectivity induces caspase-dependent apoptosis in prostate cancer cells via a novel mechanism involving inhibition of PKC\(\varepsilon\) without affecting Akt and suggest that it may emerge as a novel therapeutic agent against clinical prostate cancer in human.\[5\]

Wedelolactone exhibits anti-fibrotic effects, it can significantly inhibit the activation of LX-2 cells, the underlying mechanisms of which included inducing Bcl-2 family involved apoptosis, up-regulating phosphorylated status of ERK and JNK expressions, and inhibiting nuclear factor-\(\kappa\)B (NF-\(\kappa\)B) mediated activity, it may present as a useful tool for the prevention and treatment of hepatic fibrosis.\[6\]

Wedelolactone can inhibit breast cancer-mediated osteoclastogenesis, it inhibits the upregulation of osteoclasts stimulated by MDA62MB62231 breast cancer cells, regulates breast cancer-enhanced interaction of osteoblasts and osteoclasts by decreasing M-CSF expression in MDA62MB62231-stimulated osteoblasts; thus, suggests that wedelolactone
may be a potential natural agent for preventing and treating bone destruction in patients with bone metastasis due to breast cancer.[7]

[ Solvent ]
Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[ HPLC Method ][8]
Mobile phase: Methanol- 0.2% Formic acid in water=57:43;
Flow rate: 1.0 ml/min;
Column temperature: 30 °C;
The wave length of determination: 351 nm.

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

[ References ]

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