[ Product Information ]

Name: Miltirone
Catalog No.: CFN98531
Cas No.: 27210-57-7
Purity: > 98%
M.F: C_{19}H_{22}O_{2}
M.W: 282.38

Physical Description: Red powder
Synonyms: 5,6,7,8-Tetrahydro-8,8-dimethyl-2-(1-methylethyl)-3,4-phenanthrenedione;
5,6,7,8-Tetrahydro-2-isopropyl-8,8-dimethyl-3,4-phenanthrenedione;Rosmariquinone.

[ Intended Use ]

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

[ Source ]
The root of Salvia miltiorrhiza Bge.
[Biological Activity or Inhibitors]

Miltirone is one of the bioactive diterpene quinones isolated from Salvia miltiorrhiza Bunge, possesses significant anticancer, antibacterial, antioxidant, and anti-inflammatory activities, the hepatocyte metabolism is the major route of clearance for miltirone.\[^1\]

Miltirone has antiprotozoal activity against T. brucei rhodesiense STIB 900.\[^2\]

Miltirone has been characterized as a low-affinity ligand for central benzodiazepine receptors, it might ameliorate the symptoms associated with discontinuation of long-term administration of ethanol or of other positive modulators of the GABA A receptor; it is the likely active constituent of S. miltiorrhiza responsible for the reducing effect of its extracts on alcohol intake in different experimental models of excessive alcohol consumption.\[^3,4\]

Miltirone is a CYPs inhibition, the inhibition is weaker than dihydrotanshinone, but stronger than cryptotanshinone, tanshinone I and tanshinone IIA.\[^5\]

Miltirone may exert its antileukemic activity by inducing apoptosis through a ROS-dependent destructive cycle involving ER stress and mitochondrial dysfunction.\[^6\]

Miltirone is collateral sensitive in multidrug-resistant P-gp-overexpressing cells, induces G2/M arrest, and triggers apoptosis via ROS-generated breakdown of MMP and DNA damage, therefore, miltirone may be a promising candidate for cancer chemotherapy.\[^7\]

[Solvent]

Chloroform, Dichloromethane, DMSO, Acetone, etc.

[HPLC Method]\[^8\]

Mobile phase: 0.1% Aqueous formic acid- Acetonitrile, gradient elution;
Flow rate: 1.0 ml/min;
Column temperature: Room Temperature;
The wave length of determination: 281 nm.

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

[ References ]


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