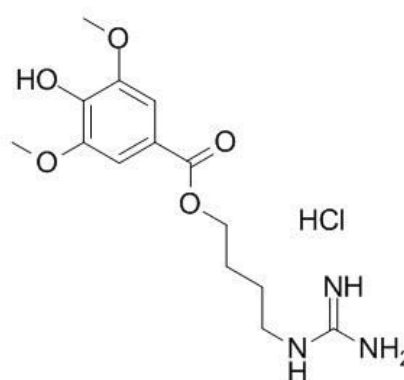


## Leonurine hydrochloride Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)**[ Product Information ]****Name:** Leonurine hydrochloride**Catalog No.:** CFN99529**Cas No.:** 24697-74-3**Purity:** > 98%**M.F:** C<sub>14</sub>H<sub>21</sub>O<sub>5</sub>N<sub>3</sub>·HCl·H<sub>2</sub>O**M.W:** 311.33**Physical Description:** White cryst.**Synonyms:** 4-Hydroxy-3,5-dimethoxybenzoic acid 4-(diaminomethylideneamino)butyl ester.**[ Intended Use ]**

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

**[ Source ]**The herb of *Leonurus heterophyllus* Sweet.

## **[ Biological Activity or Inhibitors ]**

Leonurine hydrochloride (LH), a major alkaloid compound extracted from *Leonurus japonicus* Houtt. (Labiatae), is considered to have antitumor roles; LH increases the expression levels of caspase-3, caspase-9 and Bax/Bcl-2, it inhibits the proliferation and induces the apoptosis of H292 cells in a mitochondria-dependent pathway.<sup>[1]</sup>

Leonurine hydrochloride can inhibit osteoclastogenesis and prevent osteoporosis associated with estrogen deficiency by inhibiting the NF- $\kappa$ B and PI3K/Akt signaling pathways, it might be a promising therapeutic compound to treat osteoclast-related diseases, such as osteoporosis.<sup>[2]</sup>

Leonurine hydrochloride can remarkably elevate the serum estradiol level in rats, but has no obvious effect on progesterone level; LH has an inhibitory effect on bleeding caused by incomplete abortion, the mechanism may be related to up-regulation of the E2 level, leading to an increase in uterine contractions and evacuation of intrauterine residuum.<sup>[3]</sup>

## **[ Solvent ]**

Pyridine, Methanol, Hot water, etc.

## **[ HPLC Method ]**<sup>[4]</sup>

Mobile phase: Acetonitrile- 0.4% Sodium octanesulfonate of 0.1% phosphoric acid solution=24:76;

Flow rate: 1.0 ml/min;

Column temperature: Room Temperature;

The wave length of determination: 277 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Mao F, Zhang L, Cai M H, *et al. Pharm. Biol.*, 2015, 53(11):1684-90.
- [2] Yuan F L, Xu R S, Jiang D L, *et al. Bone*, 2015, 75:128-37.
- [3] Li X, Yuan F L, Zhao Y Q, *et al. Eur. J. Obstet. Gyn. R. B.*, 2011, 159(2):375-80.
- [4] Chen B L, Zhu M, Huang W G, *et al. Drug Standards of China*, 2011, 12(2):111-3.

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