

## Loganin Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

### [ Product Information ]

**Name:** Loganin

**Catalog No.:** CFN99858

**Cas No.:** 18524-94-2

**Purity:** >=98%

**M.F:** C<sub>17</sub>H<sub>26</sub>O<sub>10</sub>

**M.W:** 390.38

**Physical Description:** Powder

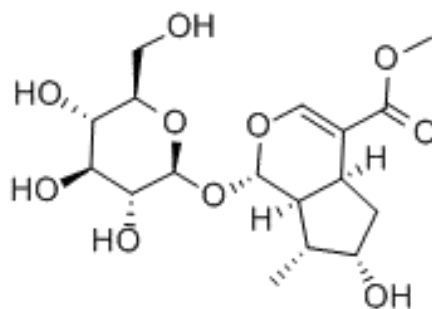
**Synonyms:**

Methyl-1-(beta-D-glucopyranosyloxy)-6-hydroxy-7-methyl-1,4a,5,6,7,7a-hexahydrocyclopenta[c]pyran-4-c;

Methyl-(1S,4aS,6S,7R,7aS)-1-(beta-D-glucopyranosyloxy)-6-hydroxy-7-methyl-1,4a,5,6,7,7a-hexahydrocyclopenta[c]pyran-4-carboxylate;

Methyl(1S,4aS,6S,7R,7aS)-1-(hexopyranosyloxy)-6-hydroxy-7-methyl-1,4a,5,6,7,7a-hexahydrocyclopenta[c]pyran-4-carboxylate;

Methyl-1-(hexopyranosyloxy)-6-hydroxy-7-methyl-1,4a,5,6,7,7a-hexahydrocyclopenta[c]pyran-4-carboxylate.



### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;

4. Intermediates & Fine Chemicals;

5. Others.

### **[ Source ]**

The fruits of *Cornus officinalis* Sieb. et Zucc.

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

Loganin has neuroprotective properties, it protects against hydrogen peroxide-induced apoptosis by inhibiting phosphorylation of JNK, p38, and ERK 1/2 MAPKs in SH-SY5Y cells, it may be a potential therapeutic agent for the treatment of neurodegenerative diseases.<sup>[1]</sup>

Loganin inhibits advanced glycation endproduct formation and the expression of its receptor, and nuclear factor-kappa B-induced inflammation in the hepatic tissue of db/db mice; hyperglycemia and dyslipidemia are ameliorated in both the serum and hepatic tissue in loganin-treated db/db mice; loganin exhibits protective effects against hepatic injury and other diabetic complications associated with abnormal metabolic states and inflammation caused by oxidative stress and advanced glycation endproduct formation.<sup>[2]</sup>

Loganin may have anti-amnesic activity that may hold significant therapeutic value in alleviating certain memory impairments observed in Alzheimer's disease, it can significantly inhibit acetylcholinesterase activity in the hippocampus and frontal cortex. <sup>[3]</sup>

### **[ Solvent ]**

Pyridine, Methanol, Ethanol, etc.

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

Mobile phase: Methanol -H<sub>2</sub>O=16:84 ;

Flow rate: 1.0 ml/min;

Column temperature: 30 °C;

The wave length of determination: 236 nm.

## **[ Storage ]**

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

## **[ References ]**

- [1] Kwon S H, Kim J A, Hong S I, *et al. Neurochem. Int.*, 2011, 58(4):533-41.
- [2] Yamabe N, Noh J S, Chan H P, *et al. Eur. J. Pharmacol.*, 2010, 648(1-3):179-87.
- [3] Kwon S H, Kim H C, Lee S Y, *et al. Eur. J. Pharmacol.*, 2009, 619(1-3):44-9.
- [4] Li X, Wang Q, Zhang L, *et al. Biomed. Chromatogr.*, 2006, 20(10):1087-92.

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