

## Astragaloside I Datasheet

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

### [ Product Information ]

**Name:** Astragaloside I

**Catalog No.:** CFN99172

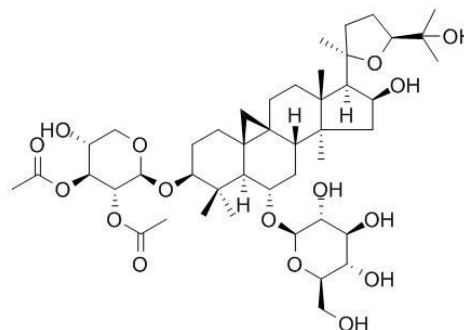
**Cas No.:** 84680-75-1

**Purity:** > 98%

**M.F:** C<sub>43</sub>H<sub>68</sub>O<sub>16</sub>

**M.W:** 840.99

**Physical Description:** White cryst.



**Synonyms:**β-D-glucopyranoside,(3β,6α,16β,20R,24S)-3-[(2,3-di-O-acetyl-β-D-xylopyranosyl)oxy]-20,24-epoxy-16,25-dihydroxy-14-methyl-9,19-cyclocholestan-6-yl;Cyclosieversioside B.

### [ Intended Use ]

1. Reference standards;
2. Pharmacological research;
3. Food research;
4. Cosmetic research;
5. Synthetic precursor compounds;
6. Intermediates & Fine Chemicals;
7. Ingredient in supplements, beverages;
8. Others.

## **[ Source ]**

The root of *Astragalus membranaceus* (Fisch.) Bunge.

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

Astragaloside I(As-I), one of the main active ingredients in *Astragalus membranaceus*, As-I stimulates osteoblast differentiation through the Wnt/ $\beta$ -catenin signaling pathway, which also activates the BMP pathway and RANK pathway, thus highlighting the As-I for pharmaceutical and medicinal applications such as treating bone disease.<sup>[1]</sup>

Astragaloside I may protect the cerebral tissue against the free radical damage in ischemia.<sup>[2]</sup>

Astragaloside I can inhibit the activation of BV-2 cells induced by LPS through suppressing the activation of PI3K/Akt/NF- $\kappa$ B pathway, therefore, reduces the nuclear translocation of phosphorylated NF- $\kappa$ B, leading to the down-regulation of the gene expressions of TNF- $\alpha$ , i NOS and IL-1 $\beta$  and thus lessened the production of iNOS, TNF- $\alpha$  and COX-2 protein.<sup>[3]</sup>

## **[ Solvent ]**

Pyridine, Methanol, Ethanol, Hot water, etc.

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

HPLC-ELSD

Mobile phase: Acetonitrile- H<sub>2</sub>O=91:9 ;

Flow rate: 1.0 ml/min;

Column temperature: 28 °C;

Drift tube temperature: 65 °C

Flow rate of gas : 0.9L/min.

## **[ Storage ]**

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

## **[ References ]**

- [1] Cheng X , Wei B F, Sun L, *et al. Phytother. Res.*, 2016,7.
- [2] Luo Y M. *Chinese Journal of Clinical Neurosciences*, 1998(03):146-8.
- [3] Liu H S, Li W H, Shen H, *et al. China Journal of Traditional Chinese Medicine & Pharmacy*, 2016(05).
- [4] Qin J P, Yao Y, Li Y, *et al. Chinese Traditional Patent Medicine*, 2008, 30(10):1468-71.

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