

PRODUCT INFORMATION



Astragaloside II

Item No. 40139

CAS Registry No.: 84676-89-1
Formal Name: (3 β ,6 α ,16 β ,20R,24S)-3-[(2-O-acetyl- β -D-xylopyranosyl)oxy]-20,24-epoxy-16,25-dihydroxy-9,19-cyclolanostan-6-yl, β -D-glucopyranoside

Synonyms: Astrasieversianin VIII, NSC 641295

MF: C₄₃H₇₀O₁₅

FW: 827.0

Purity: $\geq$ 98%

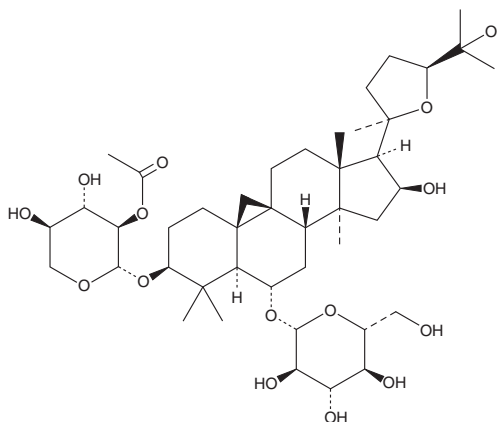
Supplied as: A solid

Storage: -20°C

Stability: $\geq$ 4 years

Item Origin: Plant/*Astragalus membranaceus* (Fisch.) Bunge

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Laboratory Procedures

Astragaloside II is supplied as a solid. A stock solution may be made by dissolving the astragaloside II in the solvent of choice, which should be purged with an inert gas. Astragaloside II is soluble in methanol.

Description

Astragaloside II is a triterpene saponin that has been found in *A. membranaceus* and has diverse biological activities.¹⁻⁵ It increases the phosphatase activity of CD45 in cell-free assays using 4-nitrophenyl phosphate (pNPP; Item No. 34081) or OMFP as substrates (EC₅₀s = 9.23 and 5.37 μ g/ml, respectively).¹ Astragaloside II inhibits replication of dengue virus serotypes 1 and 3 in infected Vero cells (MIC = 1.56 μ g/ml for both).² It increases concanavalin A-induced proliferation of primary mouse splenocytes when used at a concentration of 30 nM.¹ Astragaloside II (50 μ M) inhibits autophagy and enhances apoptosis induced by the DNA-crosslinking agent cisplatin (Item No. 13119) in SGC-7901 gastric cancer cells.³ It prevents decreases in small intestine and colon length, as well as body weight, in a mouse model of TNBS-induced colitis when administered at a dose of 10 mg/kg.⁴ Astragaloside II (3.2 and 6.4 mg/kg) decreases the urinary albumin-to-creatinine ratio and improves histopathological scores in a rat model of diabetic nephropathy induced by streptozotocin (STZ; Item No. 13104).⁵

References

1. Wan, C.-p., Gao, L.-x., Hou, L.-f., et al. Astragaloside II triggers T cell activation through regulation of CD45 protein tyrosine phosphatase activity. *Acta Pharmacol. Sin.* **34**(4), 522-530 (2013).
2. Indu, P., Arunagirinathan, N., Rameshkumar, M.R., et al. Antiviral activity of astragaloside II, astragaloside III and astragaloside IV compounds against dengue virus: Computational docking and *in vitro* studies. *Microb. Pathog.* **152**, 104563 (2021).
3. Yang, C., Wu, C., Xu, D., et al. Astragaloside II inhibits autophagic flux and enhance chemosensitivity of cisplatin in human cancer cells. *Biomed. Pharmacother.* **81**, 166-175 (2016).
4. Lee, S.-Y., Tsai, W.-C., Lin, J.-C., et al. Astragaloside II promotes intestinal epithelial repair by enhancing L-arginine uptake and activating the mTOR pathway. *Sci. Rep.* **7**(1), 12302 (2017).
5. Su, J., Gao, C., Xie, L., et al. Astragaloside II ameliorated podocyte injury and mitochondrial dysfunction in streptozotocin-induced diabetic rats. *Front. Pharmacol.* **12**, 638422 (2021).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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