

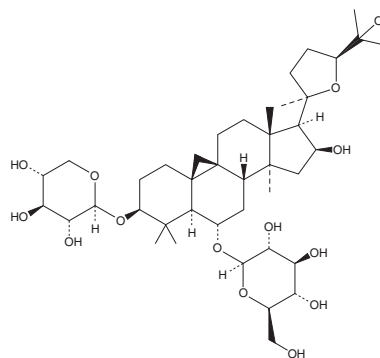
PRODUCT INFORMATION



Astragaloside IV

Item No. 12069

CAS Registry No.: 84687-43-4
Formal Name: (3 β ,6 α ,16 β ,20R,24S)-20,24-epoxy-16,25-dihydroxy-3-(β -D-xylopyranosyloxy)-9,19-cyclolanostan-6-yl, β -D-glucopyranoside
Synonyms: AS-IV, AST-IV
MF: C₄₁H₆₈O₁₄
FW: 785.0
Purity: \geq 95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Astragaloside IV is supplied as a crystalline solid. A stock solution may be made by dissolving the astragaloside IV in the solvent of choice. Astragaloside IV is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of astragaloside IV in these solvents is approximately 30 and 20 mg/ml, respectively.

Astragaloside IV is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, astragaloside IV should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Astragaloside IV has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Astragaloside IV is a bioactive saponin first isolated from the dried plant roots of the genus *Astragalus*, which is used in traditional Chinese medicine.¹ It dose-dependently inhibits human adenovirus type 3 (HAdV-3) in A549 cells (IC₅₀ = 23 μ M; LC₅₀ = 865 μ M).² It inhibits replication of HAdV-3 and decreases HAdV-3-induced apoptosis. It has diverse protective effects for the cardiovascular, immune, digestive, and nervous systems.^{1,3} In particular, it reduces myocardial infarct size in dogs when administered prior to coronary ligation and reduces reperfusion arrhythmias in isolated rat hearts.⁴

References

1. Ren, S., Zhang, H., Mu, Y., *et al.* Pharmacological effects of Astragaloside IV: A literature review. *J. Tradit. Chin. Med.* **33(3)**, 413-416 (2013).
2. Shang, L., Qu, Z., Sun, L., *et al.* Astragaloside IV inhibits adenovirus replication and apoptosis in A549 cells *in vitro*. *J. Pharm. Pharmacol.* **63(5)**, 688-694 (2011).
3. Li, L., X., H., Xu, R., *et al.* Research review on the pharmacological effects of astragaloside IV. *Fundam. Clin. Pharmacol.* **31(1)**, 17-36 (2017).
4. Zhang, W.-D., Chen, H., Zhang, C., *et al.* Astragaloside IV from *Astragalus membranaceus* shows cardioprotection during myocardial ischemia *in vivo* and *in vitro*. *Planta Med.* **72(1)**, 4-8 (2006).

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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