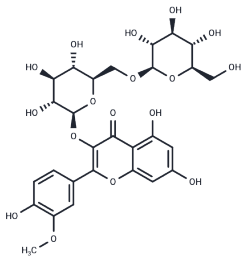
Data Sheet (Cat.No.T4082)

TargetMol

Astragaloside

Chemical Properties



CAS No. : 17429-69-5

Formula: C28H32O17

Molecular Weight: 640.55

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Astragaloside, one of the main active ingredients in Astragalus membranaceus.
Targets(IC50)	MMP,ERK,JNK
In vivo	Male SD rats received right middle cerebral artery occlusion for 120 min and AST (40 mg/kg) was orally administered. The rats were decapitated 1, 3, 7, and 14 days after reperfusion. AST treatment could down-regulate expression of iNOS mRNA, while, NGF and TrkA mRNA were up-regulated. Data suggest that AST have the protective effects on focal cerebral ischemia in rats at the different reperfusion time points, the mechanism may be related to the antioxidation, regulated the expressions of iNOS, NGF and TrkA mRNA.
Kinase Assay	Briefly, MDA-MB-231 cells treated as indicated or tumor tissues are harvested and lysed in Mg2+ lysis buffer containing 50 mM Tris (pH 7.5), 10 mM MgCl2, 0.5 M NaCl, and protease inhibitor cocktail. Equal amounts of lysates are incubated with PAK-PBD beads at 4°C for 1 h. PAK-PBD beads are pelleted by centrifugation and washed with ish buffer containing 25 mM Tris (pH 7.5), 30 mM MgCl2, 40 mM NaCl. Active Rac1 is detected by western blotting.
Cell Research	Cell viability is determined by CCK-8 assay. To be brief, cultured NSCLC cells are seeded into 96-well plates at the density of 4×104 (cells/well). Then 10 μL?well CCK8 solution is added and incubated in dark at 37°C for another 2 h. The absorbance is determined with the wavelength of 490 nm.
Animal Research	Transient cerebral ischemia and reperfusion is prepared by BCCAO, as BCCAO is considered an ideal model to study transient cerebral ischemia and reperfusion injury-mediated inflammatory response. Mice are randomLy divided into the Sham, Model, Astragaloside IV (10 mg/kg) and Astragaloside IV (20 mg/kg) treatment groups. The Astragaloside IV treatment groups are intragastrically administered 7 days before the surgery and terminated on the day of sacrifice. On the day of the surgery, Astragaloside IV is administrated 2 h prior to ischemia. The Sham-operated and Model groups are treated with distilled water. After the mice are anesthetized with an intraperitoneal injection of chloral hydrate (350 mg/kg), the bilateral common carotid arteries are exposed and carefully separated with a small ventral neck incision and occluded twice (20 min each) with ligated surgical silk as described previously with minor

Animal Research	There is a 10 min reperfusion period between the two occlusion periods (ischemia 20 min ? reperfusion 10 min ? ischemia 20 min). Sham-operated mice are subjected to the same surgical operation without the surgical silk ligation. Mouse body temperature is maintained at 37±0.5℃ during the surgery with heating equipment until recovery from the anesthesia.

Solubility Information

Solubility	DMSO: 50.00 mg/mL (78.06 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.5612 mL	7.8058 mL	15.6116 mL
5 mM	0.3122 mL	1.5612 mL	3.1223 mL
10 mM	0.1561 mL	0.7806 mL	1.5612 mL
50 mM	0.0312 mL	0.1561 mL	0.3122 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Li M, et al. Astragaloside IV attenuates cognitive impairments induced by transient cerebral ischemia and reperfusion in mice via anti-inflammatory mechanisms. Neurosci Lett. 2016 Dec 20. pii: S0304-3940(16)30994-6
Zhang H, Cai J, Li C, et al.Wogonin inhibits latent HIV-1 reactivation by downregulating histone crotonylation. Phytomedicine.2023: 154855.
He, C., Liu, Y., Xu, Z., Dai, P., Chen, X., & Jin, D. (2016). Astragaloside IV Enhances Cisplatin Chemosensitivity in Non-Small Cell Lung Cancer Cells Through Inhibition of B7-H3. Send To Cell Physiol Biochem, 40(5), 1221-1229. doi: 10.1159/000453175
Liu L, et al. [Protective effect of astragaloside IV against acute liver failure in experimental mice]. Zhonghua Gan Zang Bing Za Zhi. 2016 Oct 20;24(10):772-777.
Jiang K, et al. Astragaloside IV inhibits breast cancer cell invasion by suppressing Vav3 mediated Rac1/MAPK signaling. Int Immunopharmacol. 2016 Dec 5;42:195-202