Product Data Sheet

Product Name: Atraric acid
Cat. No.: GC66207

Chemical Properties

Cas. No.	4707-47-5		
Formula	$C_{10}H_{12}O_4$	M.Wt	196.2
Solubility	DMSO : 100 mg/mL (509.68 mM; Need ultrasonic)	Storage	4°C, stored under nitrogen
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Atraric acid		

Background

Atraric acid (Methyl atrarate) is a specific **androgen receptor (AR)** antagonist with anti-inflammatory and anticancer effects. Atraric acid represses the expression of the endogenous prostate specific antigen gene in both LNCaP and C4-2 cells. Atraric acid can also inhibit the synthesis of **NO** and cytokine, and suppress the **MAPK-NFκB** signaling pathway. Atraric acid can be used to research prostate diseases and inflammatory diseases[1][2].

Atraric acid (10 μM; CV1 cells) represses the transactivation function mediated by Dihydrotestosterone-induced human AR[1].
Atraric acid (10 μM; PCa cells) inhibits the expression of the PSA gene in both androgen-dependent and androgen-independent PCa cells[1].
Atraric acid (1-300 μM; 24 h) dose-dependently inhibits pro-inflammatory cytokine, nitric oxide, prostaglandin E2 in LPS-stimulated RAW264.7 cells, but does not influence the cell viability[2].
Atraric acid (100 and 300 μM; 18 h or 4 h) downregulates the expression of phosphorylated IκB, extracellular signal-regulated kinases (ERK) and nuclear factor

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kappa B (NFκB) signaling pathway to exhibit anti-inflammatory effects in LPS-stimulated RAW264.7 cells[2].

Cell Viability Assay[2]

Cell Line:	RAW264.7 cells
Concentration:	1-300 μM
Incubation Time:	24 h
Result:	Did not influence the cell viability.

Western Blot Analysis[2]

Cell Line:	RAW264.7 cells
Concentration:	100 and 300 μM
Incubation Time:	18 h or 4 h
Result:	Inhibited LPS-Induced expression of iNOS and COX-2 in a dose-dependent manner.Suppressed LPS-stimulated phosphorylation of the Nfκb signaling pathway.

Atraric acid (10, 30 mg/kg; i.p.; single dosage) inhibits the production of pro-inflammatory cytokines and reduces pathological damages in LPS-induced endotoxin shock mice[2].

Animal Model:	Female BALB/c mice (7 weeks old, 17-20 g; LPS-induced endotoxin shock)[2]
Dosage:	10, 30 mg/kg
Administration:	i.p.; single dosage

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Result:	Inhibited the production of pro-inflammatory cytokines.Reduced pathological damages such as vasodilation and bleeding.

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