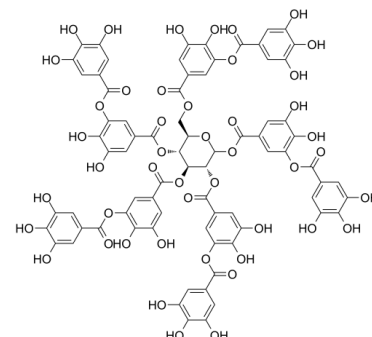


Data Sheet

Product Name:	Tannic acid
Cat. No.:	CS-7817
CAS No.:	1401-55-4
Molecular Formula:	C ₇₆ H ₅₂ O ₄₆
Molecular Weight:	1701.20
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Solubility:	DMSO : 15 mg/mL (8.82 mM; Need ultrasonic and warming)



BIOLOGICAL ACTIVITY:

Tannic acid is a novel **hERG channel** blocker with IC_{50} of 3.4 μ M. IC_{50} & Target: IC_{50} : 3.4 μ M (hERG channel)^[1] **In Vivo:** During the course of treatment, tannic acid significantly ameliorates these phenotypes in AD skin lesions. Tannic acid treatment also reduces these dermal changes compared with AD mice. Treatment with tannic acid increases PPAR γ expression in AD skin sections. The PPAR γ protein expression is suppressed in vehicle-treated AD mice, but when treated with tannic acid, its expression is increased dramatically. The IL-1 β , TNF α , TNFR1, and COX2 protein expressions are significantly up-regulated in vehicle-treated AD mice, but significantly suppressed by tannic acid treatment^[2].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: ^[2] Specific pathogen-free female 6 weeks old mice are used. The animals are maintained in a controlled room (temperature 23 \pm 2 $^{\circ}$ C, humidity 55 \pm 15%, 12 h light cycle). After 1 week, the mice are randomly divided into 3 groups, untreated group-receive vehicle (distill water) (Normal, n=5); DfE cream treated mice (100 mg/mouse) is divided into two groups and each receives vehicle (distill water) (AD, n=5) or Tannic acid (80 mg/kg/day, per oral) (AD+Tannic acid, n=5) and are allowed free access to drinking water and standard laboratory diet^[2].

References:

[1]. Xi Chu, et al. Effects of Tannic Acid, Green Tea and Red Wine on hERG Channels Expressed in HEK293 Cells. PLoS One. 2015; 10(12): e0143797.

[2]. Karuppagounder V, et al. Tannic acid modulates NF κ B signaling pathway and skin inflammation in NC/Nga mice through PPAR γ expression. Cytokine. 2015 Dec;76(2):206-13.

CAIndexNames:

Tannic acid

SMILES:

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Caution: Product has not been fully validated for medical applications. For research use only.

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