

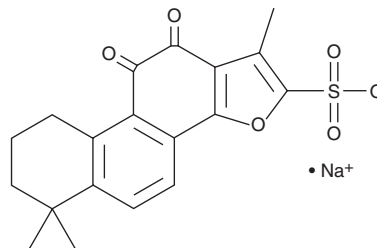
PRODUCT INFORMATION



Tanshinone IIA sulfonate (sodium salt)

Item No. 29229

CAS Registry No.: 69659-80-9
Formal Name: 6,7,8,9,10,11-hexahydro-1,6,6-trimethyl-10,11-dioxo-phenanthro[1,2-b]furan-2-sulfonic acid, monosodium salt
Synonyms: Sodium Tanshinone IIA sulfonate, Sulfotanshinone sodium II-A
MF: $C_{19}H_{17}O_6S \cdot Na$
FW: 396.4
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 226, 254, 272, 280 nm
Supplied as: A crystalline solid
Storage: $-20^{\circ}C$
Stability: ≥ 4 years



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

Laboratory Procedures

Tanshinone IIA sulfonate (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the tanshinone IIA sulfonate (sodium salt) in the solvent of choice, which should be purged with an inert gas. Tanshinone IIA sulfonate (sodium salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of tanshinone IIA sulfonate (sodium salt) in ethanol is approximately 1 mg/ml and approximately 5 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of tanshinone IIA sulfonate (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of tanshinone IIA sulfonate (sodium salt) in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Tanshinone IIA sulfonate is a derivative of tanshinone IIA (Item No. 14323) and has immunomodulatory activities.^{1,2} It reduces secretion of IL-6 and IL-8 induced by cigarette smoke extract (CSE) and prevents CSE-induced decreases in cystic fibrosis transmembrane conductance regulator (CFTR) levels in 16HBE human bronchial epithelial cells.¹ Inhalation of tanshinone IIA sulfonate (5 mg/kg) reduces lung function decline, mucus production, bronchial collagen deposition, and airspace enlargement in a mouse model of CS-induced chronic obstructive pulmonary disease (COPD). Tanshinone IIA sulfonate (15 mg/kg) reduces myocardial necrosis and production of TNF- α and IL-6 in a mouse model of sepsis induced by cecal ligation and puncture (CLP).² It reduces the number of peripheral CD4⁺ and CD8⁺ T cells and prolongs allogeneic skin graft survival in a rat transplantation model.³

References

1. Li, D., Wang, J., Sun, D., et al. *Sci. Rep.* **8**(1), 376 (2018).
2. Meng, Z.J., Wang, C., Meng, L.T., et al. *Chin. J. Nat. Med.* **16**(11), 846-855 (2018).
3. Yu, Q., Chen, H., Sheng, L., et al. *Int. Immunopharmacol.* **22**(1), 277-284 (2014).

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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