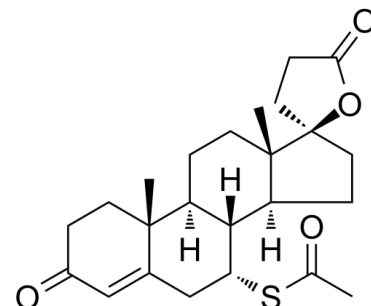


## Data Sheet

<b>Product Name:</b>	Spironolactone
<b>Cat. No.:</b>	CS-2670
<b>CAS No.:</b>	52-01-7
<b>Molecular Formula:</b>	C <sub>24</sub> H <sub>32</sub> O <sub>4</sub> S
<b>Molecular Weight:</b>	416.57
<b>Target:</b>	Androgen Receptor; Autophagy
<b>Pathway:</b>	Autophagy; Others
<b>Solubility:</b>	H <sub>2</sub> O : < 0.1 mg/mL (insoluble); DMSO : ≥ 50 mg/mL (120.03 mM)



### BIOLOGICAL ACTIVITY:

Spironolactone is a potent antagonist of the androgen receptor. Target: Androgen Receptor Spironolactone is a potassium sparing diuretic that acts by antagonism of aldosterone in the distal renal tubules. It is used mainly in the treatment of refractory edema in patients with congestive heart failure, nephrotic syndrome, or hepatic cirrhosis. Its effects on the endocrine system are utilized in the treatments of hirsutism and acne but they can lead to adverse effects. 5% topical spironolactone cream acts as an antiandrogen in human sebaceous glands, competing with DHT receptors and producing a decrease of labelled DHT. At the concentrations used the effect has been only local. No side-effects were recorded during both studies [1]. Patients who received spironolactone had a significant improvement in the symptoms of heart failure, as assessed on the basis of the New York Heart Association functional class (P<0.001). Gynecomastia or breast pain was reported in 10 percent of men who were treated with spironolactone, as compared with 1 percent of men in the placebo group (P<0.001). The incidence of serious hyperkalemia was minimal in both groups of patients [2].

### References:

- [1]. Berardesca, E., et al., Topical spironolactone inhibits dihydrotestosterone receptors in human sebaceous glands: an autoradiographic study in subjects with acne vulgaris. *Int J Tissue React*, 1988. 10(2): p. 115-9.
- [2]. Pitt, B., et al., The effect of spironolactone on morbidity and mortality in patients with severe heart failure. Randomized Aldactone Evaluation Study Investigators. *N Engl J Med*, 1999. 341(10): p. 709-17.

### CAIndexNames:

Pregn-4-ene-21-carboxylic acid, 7-(acetylthio)-17-hydroxy-3-oxo-, γ-lactone, (7α,17α)-

### SMILES:

CC(=O)S[C@H]1CC[C@@H]2[C@@]1(CC[C@H]3[C@H]2CC=C4[C@@]3(CC[C@@H](C4)O)C(=O)C)[C@H]1CC[C@@H]1C

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

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