

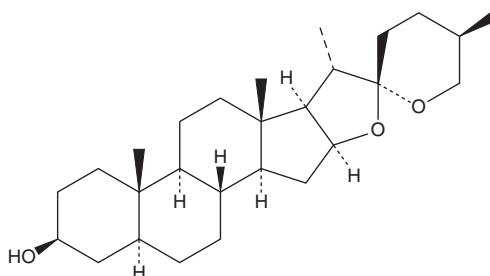
# PRODUCT INFORMATION



## Tigogenin

Item No. 30137

CAS Registry No.: 77-60-1  
Formal Name: (3 $\beta$ ,5 $\alpha$ ,25R)-spirostan-3-ol  
Synonym: NSC 93754  
MF: C<sub>27</sub>H<sub>44</sub>O<sub>3</sub>  
FW: 416.6  
Purity:  $\geq$ 90%  
Supplied as: A solid  
Storage: -20°C  
Stability:  $\geq$ 2 years  
Item Origin: Natural/Source unknown



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

### Laboratory Procedures

Tigogenin is supplied as a solid. A stock solution may be made by dissolving the tigogenin in the solvent of choice, which should be purged with an inert gas. Tigogenin is soluble in the organic solvent dimethyl formamide at a concentration of approximately 2 mg/ml.

### Description

Tigogenin is a steroidal sapogenin that has been found in *A. sisalana* and has diverse biological activities.<sup>1-4</sup> It increases the proliferation rate of, as well as mRNA levels of genes encoding the osteoblastic differentiation markers *Cbfa1*, collagen type I, and osteocalcin in, mouse bone marrow stromal cells (BMSCs) in a concentration-dependent manner.<sup>2</sup> It also increases matrix calcium deposition in BMSCs when used at concentrations of 30 and 90  $\mu$ M. Tigogenin is active against the fungus *A. fumigatus* (MIC<sub>50</sub> = 16  $\mu$ g/ml).<sup>3</sup> It inhibits carrageenan-induced paw edema in rats when administered at a dose of 4.2  $\mu$ g/kg.<sup>4</sup>

### References

1. Cripps, A.L. and Blunden, G. A quantitative gas-liquid chromatographic method for the estimation of hecogenin and tigogenin in the leaves, juice and sapogenin concentrates of *Agave sisalana*. *Steroids* **31(5)**, 661-669 (1978).
2. Zhou, H., Yang, X., Wang, N., *et al.* Tigogenin inhibits adipocytic differentiation and induces osteoblastic differentiation in mouse bone marrow stromal cells. *Mol. Cell Endocrinol.* **270(1-2)**, 17-22 (2007).
3. Upadhyay, S.K., Creech, C.C., Bowdy, K.L., *et al.* Synthesis and antifungal activity of functionalized 2,3-spirostan isomers. *Bioorg. Med. Chem. Lett.* **21(10)**, 2826-2831 (2011).
4. Peana, A.T., Moretti, M.D., Manconi, V., *et al.* Anti-inflammatory activity of aqueous extracts and steroidal sapogenins of *Agave americana*. *Planta Med.* **63(3)**, 199-202 (1997).

#### 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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