

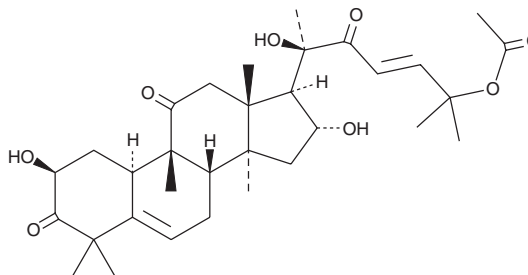
# PRODUCT INFORMATION



## Cucurbitacin B

Item No. 14820

CAS Registry No.: 6199-67-3  
Formal Name: (2 $\beta$ ,9 $\beta$ ,10 $\alpha$ ,16 $\alpha$ ,23E)-25-(acetyloxy)-2,16,20-trihydroxy-9-methyl-19-norlanosta-5,23-diene-3,11,22-trione  
Synonyms: Cuc B, NSC 49451, NSC 144154  
MF: C<sub>32</sub>H<sub>46</sub>O<sub>8</sub>  
FW: 558.7  
Purity:  $\geq 98\%$   
UV/Vis.:  $\lambda_{\text{max}}$ : 226 nm  
Supplied as: A crystalline solid  
Storage: -20°C  
Stability:  $\geq 2$  years  
Item Origin: Plant/*Cucumis melo* L.



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

### Laboratory Procedures

For long term storage, we suggest that cucurbitacin B be stored as supplied at -20°C. It should be stable for at least two years.

Cucurbitacin B is supplied as a crystalline solid. A stock solution may be made by dissolving the cucurbitacin B in the solvent of choice. Cucurbitacin B is soluble in organic solvents such as acetonitrile, dichloromethane, and ethyl acetate, which should be purged with an inert gas.

Cucurbitacin B is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Cucurbitacin B is a plant-derived triterpene that has the classic four-ring structure of mammalian steroids. It has diverse effects on mammalian cells, most notably inducing cell cycle arrest or apoptosis in a range of cancer cell lines.<sup>1-3</sup> Cucurbitacin B inhibits the growth of several breast cancer cell lines (IC<sub>50</sub>s = 18-50 nM).<sup>4</sup> It suppresses the growth of tumors developed from MDA-MB-231 and 4T-1 breast cancer cells in mice.<sup>4</sup> Cucurbitacin B blocks the inflammatory response of macrophages treated with lipopolysaccharide.<sup>5</sup> In *Drosophila*, it serves as an ecdysteroid receptor antagonist (K<sub>d</sub> = 5  $\mu$ M).<sup>6</sup>

### References

1. Duangmano, S., Sae-lim, P., Suksamrarn, A., et al. *BMC Complement. Altern. Med.* **12**,185-197 (2012).
2. Dakeng, S., Duangmano, S., Jiratchariyakul, W., et al. *J. Cell Biochem.* **113**(1), 49-60 (2012).
3. Zhang, M., Bian, Z.-G., Zhang, Y., et al. *Mol. Med. Rep.* **10**(6), 2905-2911 (2014).
4. Gupta, P. and Srivastava, S.K. *Oncotarget* **5**(7), 1812-1828 (2014).
5. Kim, M., Park, S.Y., Jin, M.L., et al. *Immunopharmacol. Immunotoxicol.* **37**(5), 473-480 (2015).
6. Dinan, L., Whiting, P., Girault, J.-P., et al. *Biochem. J.* **327**, 643-650 (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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