

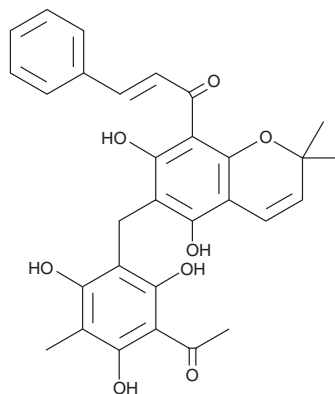
# PRODUCT INFORMATION



## Rottlerin

Item No. 12006

**CAS Registry No.:** 82-08-6  
**Formal Name:** (2E)-1-[6-[[3-acetyl-2,4,6-trihydroxy-5-methylphenyl)methyl]-5,7-dihydroxy-2,2-dimethyl-2H-1-benzopyran-8-yl]-3-phenyl-2-propen-1-one  
**Synonyms:** Mallotoxin, NSC 56346, NSC 94525  
**MF:** C<sub>30</sub>H<sub>28</sub>O<sub>8</sub>  
**FW:** 516.5  
**Purity:** ≥90%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Rottlerin is supplied as a solid. A stock solution may be made by dissolving the rottlerin in the solvent of choice. Rottlerin is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 100 mM.

### Description

Rottlerin was originally identified as an inhibitor of PKCd (IC<sub>50</sub> = 3 μM), but can also inhibit CAM kinase III and a wide range of protein kinases, including PRAK and MAPKAP-K2 (IC<sub>50</sub>s = 1.9 and 5 μM, respectively).<sup>1,2</sup> It can act as a direct mitochondrial uncoupler, and stimulates autophagy by targeting a signaling cascade upstream of mTORC1.<sup>3</sup> Rottlerin has also been shown to have neuroprotective effects in an MPTP animal model of Parkinson's disease.<sup>4</sup>

### References

1. McGovern, S.L. and Shoichet, B.K. Kinase inhibitors: Not just for kinases anymore. *J. Med. Chem.* **46**, 1478-1483 (2003).
2. Davies, S.P., Reddy, H., Caivano, M., *et al.* Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem. J.* **351**, 95-105 (2000).
3. Balgi, A.D., Fonseca, B.D., Donohue, E., *et al.* Screen for chemical modulators of autophagy reveals novel therapeutic inhibitors of mTORC1 signaling. *PLoS One* **4(9)**, (2009).
4. Zhang, D., Anantharam, V., Kanthasamy, A., *et al.* Neuroprotective effect of protein kinase Cd inhibitor rottlerin in cell culture and animal models of Parkinson's disease. *J. Pharmacol. Exp. Ther.* **322(3)**, 913-922 (2007).

#### 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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