

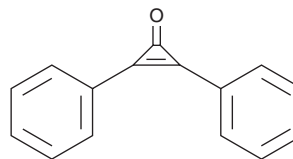
# PRODUCT INFORMATION



## Diphencyprone

Item No. 27982

**CAS Registry No.:** 886-38-4  
**Formal Name:** 2,3-diphenyl-2-cyclopropen-1-one  
**Synonyms:** Diphenylcyclopropenone, DPC, NSC 57541  
**MF:** C<sub>15</sub>H<sub>10</sub>O  
**FW:** 206.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 220, 227, 299 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Diphencyprone (DCP) is supplied as a solid. A stock solution may be made by dissolving the DCP in the solvent of choice, which should be purged with an inert gas. DCP is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DCP in ethanol is approximately 14 mg/ml and approximately 20 mg/ml in DMSO and DMF.

DCP is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DCP should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DCP has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

DCP is a contact sensitizing agent.<sup>1-3</sup> Pretreatment with DCP reduces symptom severity in a mouse model of experimental autoimmune encephalomyelitis (EAE) induced by myelin basic protein (1-10) (MBP<sub>1-10</sub>).<sup>1</sup> It enhances IL-10 production and antigen-specific IgG2a antibody responses and reduces anaphylaxis and asthma induced by ovalbumin in mice when administered during ovalbumin immunization at a concentration of 1% v/v.<sup>2</sup> Topical administration of DCP increases intrafollicular CD4<sup>+</sup> and CD8<sup>+</sup> T cells, reduces upper dermal inflammation, and stimulates hair growth in the C3H/HeJ mouse model of alopecia areata.<sup>3</sup> Formulations containing DCP have been used in the treatment of alopecia areata.

### References

1. Meister, M., Tounsi, A., Gaffal, E., *et al.* Self-antigen presentation by keratinocytes in the inflamed adult skin modulates T-cell auto-reactivity. *J. Invest. Dermatol.* **135(8)**, 1996-2004 (2015).
2. von Moos, S., Johansen, P., Waeckerle-Men, Y., *et al.* The contact sensitizer diphenylcyclopropenone has adjuvant properties in mice and potential application in epicutaneous immunotherapy. *Allergy* **67(5)**, 638-646 (2012).
3. Shapiro, J., Sundberg, J.P., Bissonnette, R.P., *et al.* Alopecia areata-like hair loss in C3H/HeJ mice and DEBR rats can be reversed using topical diphencyprone. *J. Investig. Dermatol. Symp. Proc.* **4(3)**, 239 (1999).

#### 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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