

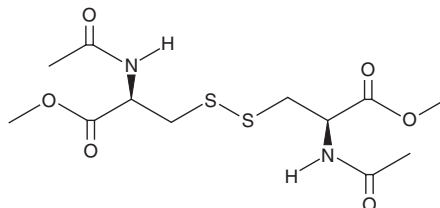
PRODUCT INFORMATION



Dimethyl diacetyl cystinate

Item No. 43064

CAS Registry No.: 32381-28-5
Formal Name: N,N'-diacetyl-L-cystine,
1,1'-dimethyl ester
Synonyms: DACDM, N,N'-Diacetyl-L-cystine
Dimethylester, NSC 136019
MF: C₁₂H₂₀N₂O₆S₂
FW: 352.4
Purity: ≥98%
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

Dimethyl diacetyl cystinate is supplied as a solid. A stock solution may be made by dissolving the dimethyl diacetyl cystinate in the solvent of choice, which should be purged with an inert gas. Dimethyl diacetyl cystinate is soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of dimethyl diacetyl cystinate can be prepared by directly dissolving the solid in aqueous buffers. Dimethyl diacetyl cystinate is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Dimethyl diacetyl cystinate is a derivative of the oxidized dimeric form of cysteine L-cystine (Item No. 31727).¹ It inhibits UVB radiation-induced NF-κB nuclear translocation in and IL-1α secretion from HaCaT cells when used at concentrations of 50 or 100 μM. Dimethyl diacetyl cystinate (10 μg/ml) decreases proliferation and IFN-γ and IL-2 secretion in a co-culture of lymphocytes isolated from BALB/c mice and irradiated splenocytes isolated from C57BL/10J mice.² Subconjunctival administration of dimethyl diacetyl cystinate (8 μg/animal) reduces corneal glutathione (GSH) levels and increases corneal allograft survival in mice.

References

1. Kitazawa, M., Nakano, T., Chuujou, H., *et al.* Intracellular redox regulation by a cystine derivative suppresses UV-induced NF-κB activation. *FEBS Lett.* **526(1-3)**, 106-110 (2002).
2. Yamada, J., Hamuro, J., Terai, K., *et al.* Major histocompatibility complex semi-matching improves murine corneal allograft survival under oxidative macrophage dominancy. *Transplantation* **84(7)**, 899-907 (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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