

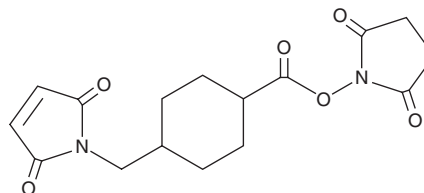
PRODUCT INFORMATION



SMCC

Item No. 28955

CAS Registry No.: 64987-85-5
Formal Name: 4-[(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)methyl]-cyclohexanecarboxylic acid, 2,5-dioxo-1-pyrrolidinyl ester
Synonyms: NSC 344483, Succinimidyl 4-(N-maleimidomethyl) cyclohexan-1-carboxylate
MF: C₁₆H₁₈N₂O₆
FW: 334.3
Purity: ≥98%
UV/Vis.: λ_{max}: 217 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

SMCC is supplied as a solid. A stock solution may be made by dissolving the SMCC in the solvent of choice, which should be purged with an inert gas. SMCC is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of SMCC in these solvents is approximately 10 and 15 mg/ml, respectively.

SMCC is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SMCC should first be dissolved in DMF and then diluted with the aqueous buffer of choice. SMCC has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SMCC is a heterobifunctional cross-linking reagent that contains an amine-reactive N-hydroxysuccinimide ester and a sulfhydryl-reactive maleimide group that can be used in the conjugation of proteins.¹⁻³ It has been used to cross-link the anticancer agent DM1 (mertansine; Item No. 22483) to an IgG1 monoclonal antibody to form the antibody-drug conjugate DM1-SMCC (Item No. 23926).⁴ Immunization of mice with SMCC-coupled keyhole limpet hemocyanin (KLH) antigen and syngeneic splenocytes increases the percentage of proliferating T cells in isolated splenocytes from recipient mice compared to mice immunized with KLH and the adjuvant LPS.³

References

1. Bieniarz, C., Husain, M., Barnes, G., *et al.* Extended length heterobifunctional coupling agents for protein conjugations. *Bioconjug. Chem.* **7(1)**, 88-95 (1996).
2. Hermanson, G.T. The reactions of bioconjugation. *Bioconjugate Techniques*. Audet, J., editor, 3rd edition, Elsevier Inc. (2013).
3. Guo, Y., Werbel, T., Wan, S., *et al.* Potent antigen-specific immune response induced by infusion of spleen cells coupled with succinimidyl-4-(N-maleimidomethyl cyclohexane)-1-carboxylate (SMCC) conjugated antigens. *Int. Immunopharmacol.* **31**, 158-168 (2019).
4. Luo, Q., Chung, H.H., Borths, C., *et al.* Structural characterization of a monoclonal antibody-maytansinoid immunoconjugate. *Anal. Chem.* **88(1)**, 695-702 (2016).

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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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM