

EMCA

22306

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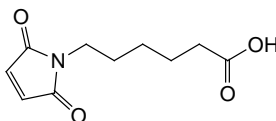
Number**Description**

22306

EMCA (*N*- ϵ -maleimidocaproic acid), 1gFormula: C₁₀H₁₃NO₄

Molecular Weight: 211.21

Spacer Arm: 9.4Å



Storage: Upon receipt store product desiccated at 4°C. Product is shipped at ambient temperature.

Introduction

Thermo Scientific EMCA is a heterobifunctional crosslinker that reacts with sulfhydryls (-SH) to present a terminal carboxyl group. Additionally, the carboxyl can be coupled to amine-containing molecules using the water-soluble carbodiimide EDC. The EDC reaction results in an intermediate ester, which can react with primary amines to form amide bonds. Thus, amine-containing molecules can be modified to contain sulfhydryl-reactive maleimides using these reagents.

Product Information

- Allow vial contents to warm completely to room temperature before opening, to prevent condensation inside the vial and subsequent hydrolysis of the reagent. Do not store the crosslinker in solution, as hydrolysis may occur, opening the maleimide ring and rendering it non-reactive toward sulfhydryls.
- To introduce maleimide groups into proteins or other molecules containing primary amines, react the carboxylic acid group to amines using EDC (Product No. 22981). Use 0.1M MES, pH 4.7 (Product No. 28390) for the EDC reaction, as the low pH is optimal for the carbodiimide reaction while preserving the integrity of the maleimide.
- Maleimides react with sulfhydryls (-SH) at pH 6.5-7.5 to form stable thioether bonds. At pH values > 7.5, reactivity toward primary amines and hydrolysis of the maleimide group can occur. Maleimide reactions are complete in 2 hours at room temperature or 4 hours at 4°C.
- For maleimide reactivity, molecules must have free sulfhydryl group(s) available. Disulfide bonds can be reduced to produce free sulfhydryls. After reduction, most reducing reagents must be removed before conjugation. The Thermo Scientific Immobilized Reductant Column (Product No. 77701) and Immobilized TCEP Disulfide Reducing Gel (Product No. 77712) enable peptide or protein reduction while recovering the sample in the absence of reducing agents.

Related Thermo Scientific Products

22980	EDC, 5g
22981	EDC, 25g
77149	EDC, 10g
28390	BupH™ MES Buffered Saline Packs, 10 packs
28372	BupH™ Phosphate Buffered Saline Packs, 40 packs
69576	Slide-A-Lyzer® MINI Dialysis Unit Kit, for 10-100 µl sample volumes, 10 units plus float
89889	Zeba™ Spin Desalting Columns, 2mL, 5/pkg
89891	Zeba™ Spin Desalting Columns, 5mL, 5/pkg
22605	MSA, 50mg, amine-reactive crosslinker with a latent carboxyl group

This product ("Product") is warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Product documentation, specifications and/or accompanying package inserts ("Documentation") and to be free from defects in material and workmanship. Unless otherwise expressly authorized in writing, Products are supplied for research use only. No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the original purchaser of the Product ("Buyer").

No other warranties, express or implied, are granted, including without limitation, implied warranties of merchantability, fitness for any particular purpose, or non infringement. Buyer's exclusive remedy for non-conforming Products during the warranty period is limited to replacement of or refund for the non-conforming Product(s).

There is no obligation to replace Products as the result of (i) accident, disaster or event of force majeure, (ii) misuse, fault or negligence of or by Buyer, (iii) use of the Products in a manner for which they were not designed, or (iv) improper storage and handling of the Products.

Current product instructions are available at www.thermoscientific.com/pierce. For a faxed copy, call 800-874-3723 or contact your local distributor.

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