

Biotin PEG2 maleimide *CAS 305372-39-8*

 Catalog number: 3015
 Unit size: 5 mg

Component	Storage	Amount
Biotin PEG2 maleimide *CAS 305372-39-8*	Freeze (< -15 °C)	1 vial (5 mg)

OVERVIEW

This thiol-reactive biotin derivative contains a long arm (~20 angstrom) to increase its avidin-binding affinity. It is widely used to label a variety of biological molecules and samples. Red cells are labeled with this spacers biotin, and the labeled cells can be detected in small blood samples (5 uL) with flow cytometry. Improved labeling efficiency and binding affinity allows an easy detection of positive red cells.

SAMPLE EXPERIMENTAL PROTOCOL
Labeling Proteins with Biotin PEG2 Maleimide

1. Dissolve your thiol-containing protein at concentration of 1 - 10 mg/mL (3 - 10 mg is the optimal labeling concentration) using PBS buffer (20 mM, pH 7.2).
2. Dissolve the Biotin PEG2 Maleimide in DMSO at a concentration of 5 - 10 mg/mL.
3. Mix the Biotin PEG2 Maleimide and protein solution at 2:1 molar ratio of biotin/protein, and shake the reaction mixture at room temperature for 2 - 4 hours.
4. Filter the reaction mixture through a protein spin column for 100 µg to 1 mg protein labeling reaction. If the reaction scale is larger than 1 mg, purify the conjugate using gel filtration on a properly sized Sephadex G-25 column.
5. Collect the desired fractions for your immediate use or freeze dry them for future use.

Labeling Small Molecules with Biotin PEG2 Maleimide

1. Dissolve Biotin PEG2 Maleimide (10 - 15 mg/mL) and your thiol-containing molecule in DMSO at 1:1.2 molar ratio of biotin/thiol-containing molecule.
2. Stir the reaction mixture at room temperature for 2 - 4 hours.
3. Purify the conjugate using HPLC (ammonium acetate/water and acetonitrile, pH 7.0).
4. Collect and pool the desired fractions.
5. Combine and freeze-dry the pooled fractions.

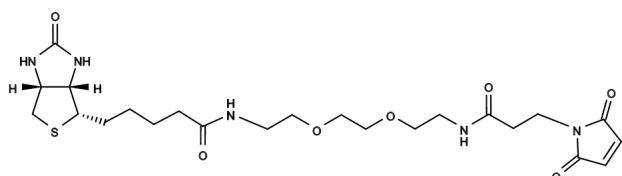
EXAMPLE DATA ANALYSIS AND FIGURES


Figure 1. Chemical structure for Biotin PEG2 maleimide *CAS 305372-39-8*