

Instructions for PEG Maleimide Conjugation

I. Introduction

The BroadPharm PEG Maleimide is a class of sulfhydryl (thiol/SH) group reactive PEG compounds that can be used to selectively modify protein, peptide or any surfaces with available sulfhydryl groups. The reaction between maleimide and thiol proceeds readily at neutral or slightly basic buffers to form stable thioether bonds.

II. Product Information

- Off-white/white solid or viscous liquid depends on molecule weight;
- Soluble in regular aqueous solution as well as most organic solvents;
- Store at -20°C and avoid frequent thaw and freeze.
- Generally, a 10- to 20-fold molar excess of PEG-Maleimide over the amount of thiol-containing material results in sufficient conjugation.

III. Additional Materials Required

- PEGylation buffer, PBS buffer, pH 7 or other thiol-free buffer at pH 7.
- Maleimide stock solution: 100 mg in 1 mL conjugation buffer.
- Washing solution: Distilled water or any aqueous buffer.

IV. Procedure for thiol-bearing molecular modification with PEG Maleimide:

1. Dissolve targeted materials in conjugation buffer and estimate the concentration thiol groups on the targeted materials.
2. Add PEG Maleimide stock solution to the targeted conjugation materials with the final concentration keep at least 10 mg/mL.
3. 10~20 molar excess of PEG maleimide needed for optimal conjugation;
4. The reaction mixture was stirred at room temperature for 2~4 hours or overnight at 4°C.
5. The final conjugate can be purified either by size exclusion chromatography, dialysis or other methods as needed.