



LumiDye™ SMCC Activated PerCP (SMCC-PerCP)

M1491733

Storage: 2-8°C. Protect from light. Do not freeze.

Size: 1 mg.

Introduction

LumiDye™ SMCC Activated PerCP (SMCC-PerCP) is formed by modifying Peridinin-Chlorophyll-Protein (PerCP) with Succinimidyl-4-(N-maleimidomethyl) cyclohexane-1-carboxylate (SMCC). It contains a maleimide group that reacts with thiol groups of target molecules, such as proteins. This product is commonly used in fluorescence microscopy, fluorescence immunoassays, dual or multicolor fluorescence analysis, cancer cell surface antigen detection, flow cytometry fluorescence assays, antibody fluorescence labeling, as well as diagnostics and biotechnology applications such as live cell imaging.

PerCP is a peridinin-chlorophyll-protein complex with a molecular weight of 35.5 kDa, isolated from Dinophyceae sp. It features a broad excitation spectrum with a main peak at 482 nm, a large Stokes shift, and its maximum emission peak is at 675 nm. PerCP and its conjugates are large complexes suitable for cell surface labeling techniques (e.g., flow cytometry).

This product is a purified conjugate of PerCP and SMCC. After purification to remove excess SMCC, it is dissolved in PBS-EDTA with 3% trehalose and ultimately supplied as a lyophilized powder. The long-term storage of this product does not affect its thiol reactivity, ensuring the optimal properties for conjugation with other thiol-containing molecules such as proteins.

Instruction for use

This product is chemically activated for easy conjugation to biomacromolecules such as antibodies. These molecules contain cysteine residues. Disulfide bonds formed between cysteine residues can be treated with a reducing agent to release free thiol groups. Thiol groups can also be added to primary amine groups of biomacromolecule, such as a protein, through chemical reactions.

The optimal concentration for this product is 5 mg/mL. Add 200 µL of ultrapure water, gently swirl the bottle to ensure complete dissolution of the dye, then proceed with labeling. Note: The SMCC-PerCP solution must be prepared fresh before each use.

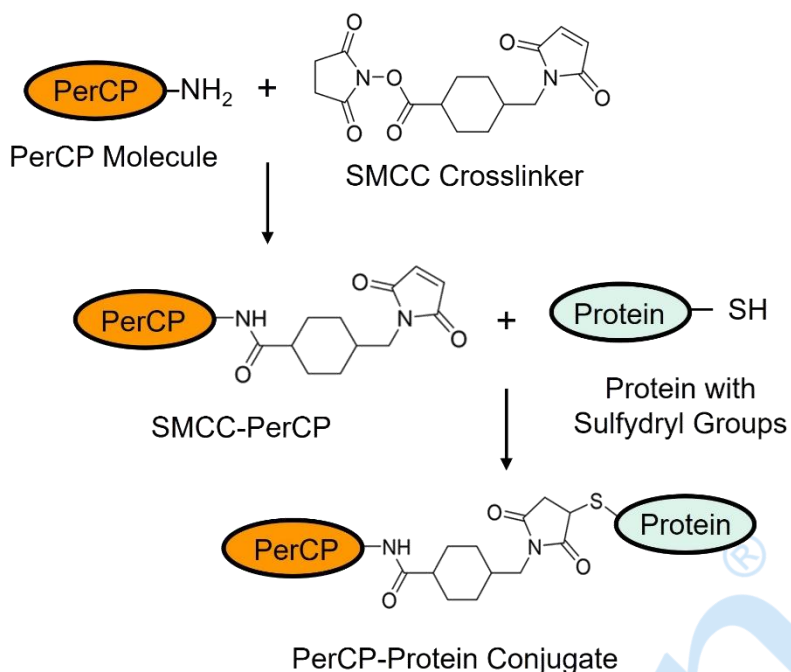


Figure 1. Schematic diagram of the conjugation of LumiDye™ SMCC Activated PerCP (SMCC-PerCP) (M1491733) to proteins.

Storage

Store at 4°C in the dark for up to 12 months. Do not store at -20°C or lower temperatures.

Matters needing attention

1. Avoid using buffers containing primary amines and thiols during the reaction to minimize unnecessary competitive reactions.
2. Fluorescent dyes are prone to quenching. Please store and use them in the dark to slow down fluorescence quenching.
3. Products conjugated with the SMCC-PerCP should be stored at 4°C in the dark. Do not freeze.
4. During operation, always wear a lab coat, disposable gloves, and protective equipment.
5. All products are for research use only.