



# Technical Data Sheet

## Lyophilized SMCC-Activated R-Phycoerythrin (Lyo SMCC-RPE)

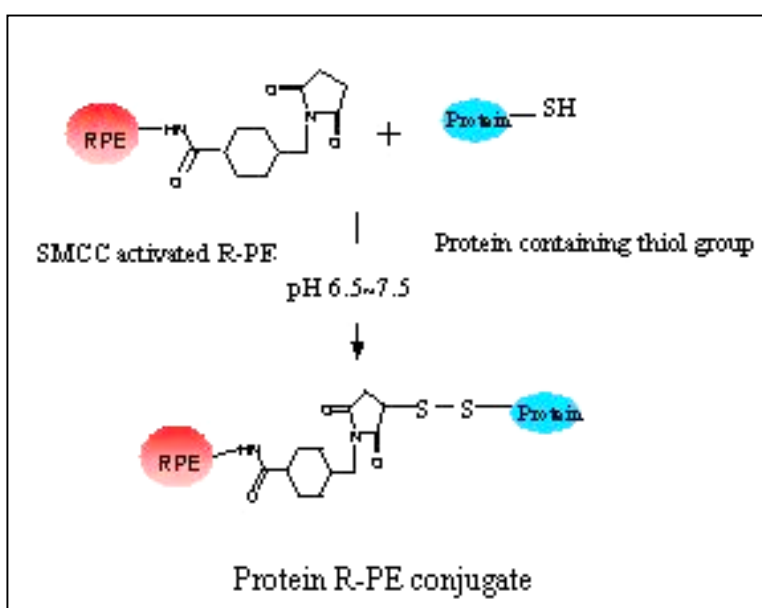
<b><u>Specification</u></b>	A565/A280 $\geq$ 5.3 SMCC/RPE: 1.5~3
<b><u>Property</u></b>	Molecular Weight                      240 KD Absorption Maximum                    565 nm Emission Maximum                      575 nm
<b><u>Storage</u></b>	Store Lyo SMCC-RPE in dark at 2~8°C with desiccant; if possible, in desiccant. Do not freeze.
<b><u>Package</u></b>	2 mg Lyo SMCC-RPE lyophilized powder is prepared in 10 mM K-P buffer with sugar as additive. No ammonium sulfate or other material may interfere conjugation is contained in this product.
<b><u>Description</u></b>	Lyo SMCC-RPE is treated with SMCC under conditions that only 1.5~3 SMCC on one RPE ensuring the best yield of conjugate with minimal aggregates. This derivative protein has been purified to remove excess SMCC and lyophilized; thus quite suitable for long term storage without losing the maleimide reactivity and keep high quality of RPE with perfect conjugation consistency. For research or further manufacturing use only.
<b><u>Reconstitution</u></b>	Reconstitute whole bottle of Lyo SMCC-RPE (2 mg) with your conjugate buffer to adjust the concentration for further use.
<b><u>Important Notes</u></b>	<b><u>Weight:</u></b> One bottle of Lyo SMCC-RPE contains 2 mg of RPE with sugar as additive. It is not accurate to measure activated RPE directly by weight. <b><u>Buffer:</u></b> The buffer containing primary amines, reducing agents or sodium azide should be avoided. Buffer such as phosphate or carbonate/bicarbonate are most often used. Recommend prepared buffer with 2-5 mM EDTA to prevent the oxidation of sulfhydryl groups (i.e., formation of disulfide bonds).

Usage: No preservative is added in the product. Once reconstitute it, please use it as soon as possible. It is not suitable to store after reconstitution.

### **Procedure for Coupling SMCC-RPE with Thiol Group**

Reaction scheme of SMCC-RPE react with thiol group containing protein.

The maleimides on SMCC-RPE will react with sulfhydryl group on protein under mild conditions of temperature and pH to form RPE-protein conjugate



1. Prepare your protein containing thiol group to the concentration at least 1-5 mg/ml.
2. Reconstitute instant Lyo SMCC-RPE with your conjugation buffer to 5-10 mg/ml, mix well.
3. Mix your protein containing thiol group with reconstituted instant Lyo SMCC-RPE solution.
4. Incubate at room temperature for 0.5-2 hours.
5. Any remaining free sulfhydryl groups could be quenched by adding NEM (N-ethylmaleimide).

### **Notes**

1. To introduce the sulfhydryls to one protein, you may either use DTT (Dithiothreitol) reduction or introduce free thiol groups by either Traut's reagent (2-Iminoethylolane) or SATA (N-Succinimidyl S-acetylthioacetate).
2. Keep your protein about 1.5~3 thiols/protein is recommended.