YamayBio

Native SHC Protein (Shrimp Hemocyanin, Activated, KLH substitution)

QUICK START GUIDE

Research use only.
Not for diagnostic procedures.

Contents and storage

Native SHC Protein (Shrimp Hemocyanin, Activated, KLH substitution)

SH2172-10mg

SH2172-100mg

SH2172-100mg×6

Storage: Store at -20°C. Product is shipped at ambient temperature.

Introduction

YamayBio Mariculture SHC is a purified shrimp (*Penaeus vannamei*) hemocyanin. It can serve as a substitute for Keyhole Limpet Hemocyanin (KLH) as a carrier protein for conjugation with low molecular weight molecules such as peptides, nucleic acids, drugs, or toxins, imparting high immunogenicity to them. Testing has shown that SHC exhibits comparable immunogenicity to KLH, while its solubility (especially after conjugation with haptens) is significantly higher than that of KLH, providing greater flexibility in immunogen preparation protocols.

Molecular Weight: 70KD and 73KD

Appearance: Dark blue powder

Purity (MPLC-SEC): ≥98%

Extinction Coefficient: 280nm(ε=1.277cm^{-1}×mg^{1}×mL)

Native PAGE analysis: Two main characteristic bands close to 70KD (MW standard)

Endotoxin Level:≤11.7 USP-EU/mg

Product Form: The hemocyanin is provided in lyophilized form. It can be reconstituted with ultrapure water.

Procedure for Hapten-Carrier Conjugation with Activated SHC

Conjugation with Hapten:

1. Resolve the powder with ultrapure water to a concentration of 10 mg/mL.
2. Dissolve 20 mg of hapten with thiol groups in 5 mL of coupling buffer (83 mM sodium phosphate, 0.1 M EDTA, 0.9 M NaCl, 0.1 mM TCEP, pH 7.2).
3. Immediately mix an equal volume of the hapten solution and the activated SHC, and react at room temperature for 2 hours.
4. Remove EDTA using molecular sieve chromatography.

Note that 0.1 mM TCEP is not necessary, which is used to treat the hapten for reducing the disulfide bond to the thiol group.

Note

This product is accurately quantified. Please dissolve and use directly in the original vial according to the desired concentration. Do not divide or transfer this product, as it may cause significant loss due to product characteristics or static electricity.