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## KLH, FITC conjugated

Catalog Number: bs-0225P-FITC

Concentration: 1.0 mg/ml

Form: Liquid

Storage: 10 mM TBS (pH=7.4) with 0.02% Proclin300 and 50% glycerol.

Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

**Background:** Keyhole limpet hemocyanin (KLH) is used extensively as a carrier protein in the production of antibodies for research, biotechnology and therapeutic applications. Haptens are substances with a low molecular weight such as peptides, small proteins and drug molecules that are generally not immunogenic and require the aid of a carrier protein to stimulate a response from the immune system in the form of antibody production. KLH is the most widely employed carrier protein for this purpose. KLH is an effective carrier protein for several reasons. Its large size and numerous epitopes generate a substantial immune response, and abundance of lysine residues for coupling haptens allows a high hapten:carrier protein ratio, increasing the likelihood of generating hapten-specific antibodies. In addition, because KLH is derived from the limpet, a gastropod, it is phylogenetically distant from mammalian proteins, thus reducing false positives in immunologically-based research techniques in mammalian model organisms. KLH can also be a challenging molecule to work with because of its propensity to aggregate and precipitate. Aggregates remain immunogenic, but limit the ability to conjugate haptens, and are difficult to manipulate in the laboratory. A high-quality KLH preparation with clear opalescent blue color is the best indicator of KLH solubility.