



**LAMPIRE**  
BIOLOGICAL LABORATORIES

**45** YEARS **STRONG**

# Lobster Hemocyanin

*Novel Carrier Protein*



# Lobster Hemocyanin

## Novel Carrier Protein



- Sustainable Source
- Simple Conjugation
- Proven Immunogenicity
- High-Quality & Consistency

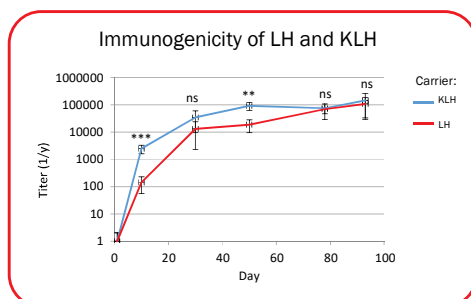
LAMPIRE has manufactured a novel carrier protein for the preparation of highly immunogenic antigens. LLH (Lobster Hemocyanin) is a protein purified from the sustainably sourced American lobster. LLH promotes the generation of rabbit polyclonal antibodies to conjugated haptens as effectively as KLH, and can be used as an alternative to or in conjunction with KLH. This product is exclusively distributed by LAMPIRE as a lyophilized powder in phosphate buffer saline and is packaged as 20 mg/vial. Other package sizes, including bulk, available upon request.

### Features and Benefits

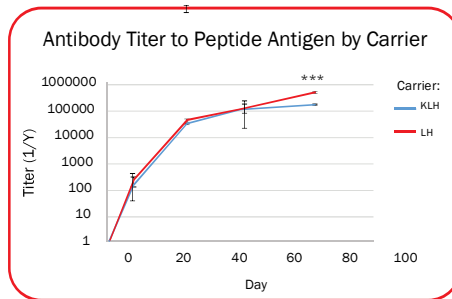
- LLH is an Effective Novel Carrier Protein
- Low Pre-Existing Immunity to LLH in Rabbits
- Comparable Antibody Titers are Elicited between LLH and KLH Conjugated Protein & Peptide Antigens
- Animals Immunized with LLH Conjugates Do Not Produce Cross-Reacting Antibodies to KLH
- Immune Response to the LLH Protein is Less than to KLH; Enhancing Response to the Hapten
- LLH Can Be Alternated in Immunization Protocols Utilizing BSA, OVA, and KLH to Reduce Immunodominance of the Carrier Molecule

### Applications

- Carrier Protein in the Production of Antibodies for Research, Biotechnology & Therapeutic Applications
- Still Being Researched & Evaluated for Additional Benefits



Comparison of Antibody titers between LH and KLH. The immunogenicity of the carrier molecule was determined by screening sera from Peptide-KLH or Peptide-LH immunized rabbits against KLH or LH respectively by ELISA (N = 3). Pre-existing antibodies against LH were undetectable by ELISA in sera isolated from naive rabbits. Antibody titers generated against LH were consistently less than that generated against KLH, however these differences were only significant at the day 10 and day 50 time points (\*\* = 0.05 > p ≥ 0.01; \*\*\* = p < 0.01).



Immune response comparison between LH and KLH conjugated to a peptide antigen. Rabbits (n=3) were immunized with peptide that had been coupled with KLH or LH. Serum samples were collected immediately before immunization, 10, 30, 50 and 78 days post-immunization and then screened in a peptide-specific, direct ELISA procedure. Titers were not significantly different between the two carriers, except for the day 78 time point (2 Tailed Student's T-test; \*\*\*p < 0.01).



## THE LAMPIRE ADVANTAGE!

- ✓ Experienced technical partner with over 45 years servicing the life science industry
- ✓ Knowledgeable and responsive sales / customer service staff
- ✓ Competitive pricing, from research sized to bulk quantities
- ✓ Customizable products available to meet your specifications