Monoclonal Anti-*Yersinia pestis* LcrV *Protein*, Clone BA5 (produced *in vitro*)

Catalog No. NR-53812

This reagent is the tangible property of the U.S. Government.

For research use only. Not for use in humans.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Antibody Class: IgG1κ
Monoclonal antibody specific to a recombinant form of the LcrV (low calcium response V or V-antigen) protein of *Yersinia pestis* (*Y. pestis*) was purified from a mouse hybridoma supernatant by protein G affinity chromatography.

Y. pestis, the causative agent of the plague, is a Gram-negative pathogen that infects many animal species, including humans, and is transmitted by arthropod vectors or aerosol droplets.[1] LcrV is a multifunctional protein that plays an important role in type III secretion in *Y. pestis*. Immunization with purified recombinant LcrV is sufficient to generate protective immunity to plague in mice, guinea pigs, and non-human primates.[2,3,4,5] Additionally, LcrV injection into animals results in the release of interleukin–10, a cytokine that suppresses innate immune functions, and also prevents the release of proinflammatory cytokines.[6]

Material Provided:

Each vial of NR-53812 contains approximately 100 µL of purified monoclonal antibody in PBS. The concentration, expressed as milligrams per milliliter, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-53812 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice. The product should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-53812 has been shown to be specific for the *Y. pestis* LcrV protein by Western blot analysis. It is reactive in ELISA and *in vivo* plague neutralization assays.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-*Yersinia pestis* LcrV Protein, Clone BA5 (produced *in vitro*), NR-53812."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

Disclaimers:

You are authorized to use this product for research use only. It is not intended for human use.

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1. DeBord, K. L., et al. "Immunogenicity and Protective Immunity Against Bubonic Plague and Pneumonic Plague by Immunization of Mice with the Recombinant V10 Antigen, a Variant of LcrV." Infect. Immun. 74 (2006): 4910–4914. PubMed: 16861680.
2. Leary, S. E., et al. "Active Immunization with Recombinant V Antigen from *Yersinia pestis* Protects Mice Against Plague." Infect. Immun. 63 (1995): 2854–2858. PubMed: 7622205.
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5. Overheim, K. A., et al. “LcrV Plague Vaccine with Altered Immunomodulatory Properties.” Infect. Immun. 73 (2005): 5152–5159. PubMed: 16041032.
6. Nakajima, R., V. L. Motin, and R. R. Brubaker. “Suppression of Cytokines in Mice by Protein A-V Antigen Fusion Peptide and restoration of Synthesis by Active Immunization.” Infect. Immun. 63 (1995): 3021–3029. PubMed: 7622225.

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