Yersinia pestis F1-V Fusion Protein, Monomer-Enriched Antigen, Recombinant from *Escherichia coli*

Catalog No. NR-2562

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Contributor:

National Institutes of Allergy and Infectious Diseases, National Institutes of Health

Product Description:

Recombinant *Yersinia pestis (Y. pestis)* F1-V fusion protein, monomer-enriched antigen was purified from *Escherichia coli* and depleted of DNA and endotoxin.[1] Originally developed by the U.S. Army Medical Research Institute of Infectious Disease (USAMRIID), F1-V is a fusion protein consisting of the Fraction 1 (F1) capsular protein and the virulence-associated (V) regulatory protein from *Y. pestis* (GenPept: AAY23169).[2,3]

Material Provided:

Each vial of NR-2562 contains lyophilized (~ 0.6 mg in 20 mM L-arginine, 10 mM sodium chloride, 1 mM L-cysteine, and 2% w/v D-mannitol) recombinant F1-V fusion protein. The concentration after reconstitution and the post-vialing pH are shown on the Certificate of Analysis for each lot.

Packaging/Storage:

NR-2562 was packaged in glass serum vials. It is provided frozen and should be stored at -70°C or colder immediately upon arrival. NR-2562 should be reconstituted with 0.5 mL of sterile water. Thawed material should be held at 2°C to 8°C and used within 8 hours of reconstitution.

Functional Activity:

NR-2562 was demonstrated to be functionally active based on its reactivity with antibodies to both the F1 and V proteins. NR-2562 is protective in a *Y. pestis* lethal challenge murine model.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: *Yersinia pestis* F1-V Fusion Protein, Monomer-Enriched Antigen, Recombinant from *Escherichia coli*, NR-2562."

Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

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References:

1. Goodin, J. L., et al. "Purification and Protective Efficacy of Monomeric and Modified *Yersinia pestis* Capsular F1-V Antigen Fusion Proteins for Vaccination against Plague." Protein Expr. Purif. 53 (2007): 63-79. PubMed: 17293124.
2. Powell, B. S., et al. "Design and Testing for a Nontagged F1-V Fusion Protein as Vaccine Antigen against Bubonic and Pneumonic Plague." Biotechnol. Prog. 21 (2005): 1490–1510. PubMed: 16209555.
3. Heath, D. G., et al. "Protection against Experimental Bubonic and Pneumonic Plague by a Recombinant Capsular F1-V Antigen Fusion Protein Vaccine." Vaccine 16 (1998): 1131–1137. PubMed: 9682370.
4. Glynn, A., et al. "Protection against Aerosolized *Yersinia pestis* Challenge following Homologous and Heterologous

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Prime-Boost with Recombinant Plague Antigens." Infect. Immun. 73 (2005): 5256–5261. PubMed: 16041052.

5. Jones, T., et al. "Intranasal Protollin/F1-V Vaccine Elicits Respiratory and Serum Antibody Responses and Protects Mice against Lethal Aerosolized Plague Infection." Vaccine 24 (2006): 1625–1632. PubMed: 16243411.
6. Santi, L., et al. "Protection Conferred by Recombinant *Yersinia pestis* Antigens Produced by a Rapid and Highly Scalable Plant Expression System." Proc. Natl. Acad. Sci. U.S.A. 103 (2006): 861–866. PubMed: 16410352.

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