

Guinea Pig Expression Clone IL-8, Recombinant in *Escherichia coli*

Catalog No. NR-36039

For research use only. Not for human use.

Contributor:

David N. McMurray, Regents Professor, Department of Microbial and Molecular Pathogenesis, Texas A & M Health Science Center, College Station, Texas

Manufacturer:

BEI Resources

Product Description:

The guinea pig is an animal model for testing novel tuberculosis vaccine candidates because it mimics human tuberculosis. The host response to vaccination and infection can be further investigated utilizing recombinant guinea pig proteins. Interleukin-8, IL-8, is a chemoattractant for neutrophils and T lymphocytes. It has been associated with inflammatory cell influx in many disease states.¹

NR-36039 is an expression clone containing the mature peptide region of IL-8 (GenBank: [NM_001173399](#)) from *Cavia porcellus* (guinea pig). The complete IL-8 gene was cloned into vector [pQE-30](#) via *Bam*HI and *Hind*III insertion sites and transformed into *Escherichia coli* (*E. coli*), strain M15, competent cells. The pQE-30 vector contains a T5 promoter, has ampicillin and kanamycin resistance, an N-terminal His-tag for purification, a thrombin cleavage site between the His-tag and the protein, and the *lacI* gene which is used for enhanced protein expression via IPTG induction.^{2,3} Refer to Table 1 for protein sequence for NR-36039.

Material Provided:

Each vial contains approximately 0.5 mL of *E. coli*, strain M15 in Luria Bertani (LB) broth containing 100 µg/mL ampicillin supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-36039 was packaged aseptically in plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:

Media:

LB Broth or Agar containing 100 µg/mL ampicillin

Incubation:

Temperature: 37°C

Atmosphere: Aerobic

Propagation:

1. Scrape the top of the frozen vial with a sterile loop or pipette tip and streak onto a selective agar plate and/or inoculate a tube of selective broth. Return the vial to storage at -60°C or colder.
2. Incubate the plate and/or tube at 37°C for 18 to 24 hours.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Guinea Pig Expression Clone IL-8, Recombinant in *Escherichia coli*, NR-36039.”

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, 2009; 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.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as

performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Lyons, M. J., T. Yoshimura and D. N. McMurray. "Mycobacterium bovis BCG Vaccination Augments Interleukin-8 mRNA Expression and Protein Production in Guinea Pig Alveolar Macrophages Infected with Mycobacterium tuberculosis." Infect. Immun. (2002): 5471-5478. PubMed: 12228272.

2. David N. McMurray, personal communication.
 3. Lyons, M. J., T. Yoshimura and D. N. McMurray. "Interleukin (IL)-8 (CXCL8) Induces Cytokine Expression and Superoxide Formation by Guinea Pig Neutrophils Infected with Mycobacterium tuberculosis." Tuberculosis (Edinb.) (2004): 283-292. PubMed: 15207803.

ATCC® is a trademark of the American Type Culture Collection.



Table 1. Amino acid sequence of expressed IL-8

MRGSHHHHHH GALVPRGXYY XMVVTKLVSE LRCQCIKIHT TPFHPKFIKE LKVIESGPRC ANSEIIVKLS DNRQLCLDPK
 KKWVQDVVSM FLKRTEQS