

**Fraction 1 Capsular Antigen (F1) from *Yersinia pestis*, Recombinant from *Escherichia coli***

**Catalog No. NR-44223**

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

**Product Description:** NR-44223 is a recombinant form of the *Yersinia pestis* (*Y. pestis*) fraction 1 capsular antigen (F1). The precursor recombinant protein was expressed in *Escherichia coli* and purified by nickel affinity chromatography. Treatment with immobilized bovine thrombin resulted in removal of the N-terminal hexa-histidine tag and the thrombin-cleaved protein was further purified by anion exchange chromatography and another round of nickel affinity chromatography to remove the cleaved tag. The final protein contains amino acid residues 22 to 170 of F1 from *Y. pestis* and four non-F1 residues at the amino terminus.

**Lot: 70009024**

**Manufacturing Date: 22NOV2017**

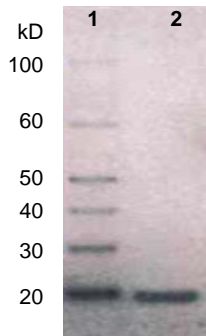
TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Clear and colorless	Clear and colorless
<b>Purity by SDS-PAGE</b>	~ 16 kDa band represents > 90% of total staining intensity above background	~ 18 kDa band represents > 90% of total staining intensity above background (Figure 1) <sup>1</sup>
<b>Identification by Mass Spectrometry</b>	Measured mass within 5% of theoretical value (15975 daltons)	Measured mass within 0.1% of theoretical value (15991 daltons)
<b>Identification by Western Blot Analysis<sup>2</sup></b>	Reactive	Reactive (Figure 2)
<b>Concentration by Bicinchoninic Acid Protein Assay</b>	Report results	0.551 mg per mL
<b>Quantity per vial</b>	220 µg	220 µg
<b>Volume per vial</b>	Report results	400 µL
<b>Endotoxin Content<sup>3</sup></b>	< 100 EU/mg	< 9.07 EU/mg
<b>Sterility</b>	0.22 µm filter-sterilized	0.22 µm filter-sterilized

<sup>1</sup>The protein migrated to a slightly larger size, based on the molecular weight markers, than was expected. However, the MALDI-TOF mass spectrum indicated that the protein was the correct size.

<sup>2</sup>Test completed utilizing monoclonal anti-*Y. pestis* F1, YPF19 (Santa Cruz Biotechnology SC-52303).

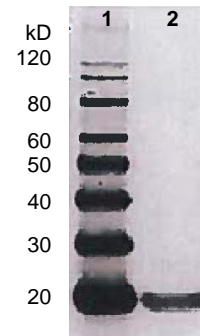
<sup>3</sup>Test completed utilizing Endosafe®-PTS™ Endotoxin Test (Charles River PTS2005F).

**Figure 1: SDS-PAGE**



Lane 1: Invitrogen™ MagicMark™ XP Protein Standard  
Lane 2: NR-44223, 1 µg

**Figure 2: Western Blot**



Lane 1: Invitrogen™ MagicMark™ XP Protein Standard  
Lane 2: NR-44223, 1 µg

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