

**ESAT-6, Recombinant Protein Reference Standard**

**Catalog No. NR-59870**

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

**Product Description:**

NR-59870 is a recombinant form of the early secretory antigenic target protein, ESAT-6. The protein sequence consists of amino acid residues 1 to 103 including a hexa-histidine tag at the C-terminus. ESAT-6 has a theoretical molecular weight of approximately 11 kDa. The recombinant ESAT-6 protein was expressed in *Escherichia coli* BL21 (DE3) pLysS cells transformed with BEI Resources NR-50170 lot 70066955 and by immobilized-metal affinity chromatography.

**Lot: 70069895**

**Manufacturing Date: 04DEC2024**

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TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Report results	Clear
<b>SDS-PAGE</b>	Protein band of interest represents > 90% of total staining intensity	Dominant band of ~ 10 kDa accounts for 95% of total staining intensity (Figure 1)
<b>Concentration by Bicinchoninic Acid Assay<sup>1</sup></b>	Report results	0.64 mg/mL
<b>Final Product</b> Quantity per vial Volume per vial	Report results Report results	198.4 µg 310 µL
<b>Western Blot Analysis</b> Polyclonal anti-ESAT-6 <sup>2</sup> Monoclonal anti-histidine tag <sup>3</sup>	Reactive Reactive	Reactive (Figure 2) Reactive (Figure 3)
<b>Endotoxin Content</b> Limulus Amoebocyte Lysate Assay <sup>4</sup>	Report results	< 7.8 EU/mg
<b>Filtration</b>	0.2 µm sterile-filtered	0.2 µm sterile-filtered

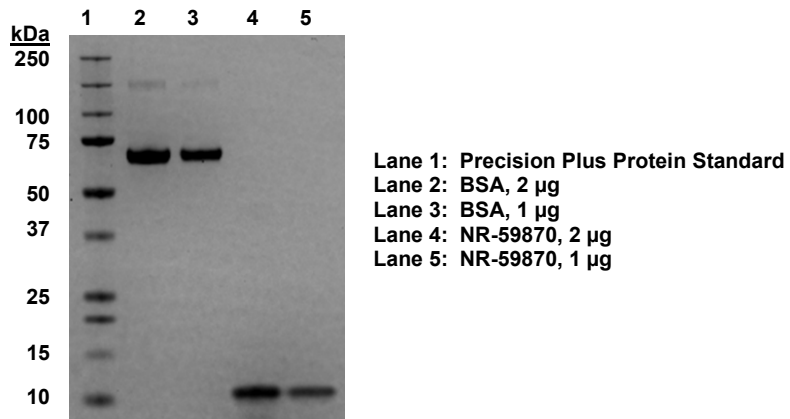
<sup>1</sup>Using bovine serum albumin (BSA) as a standard

<sup>2</sup>Using a 1:2000 dilution of rabbit polyclonal anti-*Mycobacterium tuberculosis* ESAT-6 (BEI Resources NR-13803) as primary antibody and a 1:4000 dilution of HRP-conjugated anti-rabbit IgG (R&D Systems, HAF008) as secondary antibody

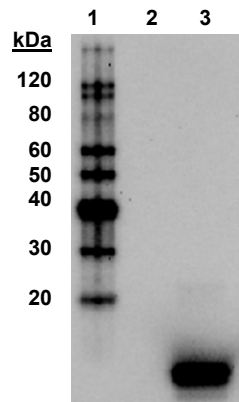
<sup>3</sup>Using a 1:4000 dilution of mouse monoclonal anti-His (R&D Systems, MAB050) as primary antibody and a 1:4000 dilution of HRP-conjugated anti-mouse IgG (R&D Systems, HAF007) as secondary antibody

<sup>4</sup>Charles River Endosafe®-PTS Endotoxin Testing System (Charles River, PTS200SF)

**Figure 1: SDS-PAGE Analysis**

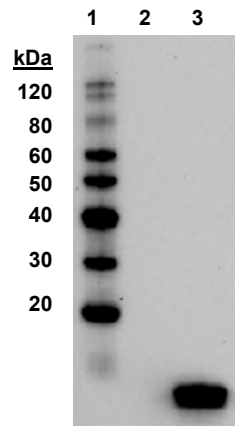


**Figure 2: Western Blot with Polyclonal Anti-ESAT 6**



Lane 1: MagicMark™ XP Protein Standard  
 Lane 2: BSA, 0.5 µg  
 Lane 3: NR-59870, 0.5 µg

**Figure 3: Western Blot with Monoclonal Anti-Histidine Tag**



Lane 1: MagicMark™ XP Protein Standard  
 Lane 2: BSA, 0.5 µg  
 Lane 2: NR-59870, 0.5 µg

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