

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

**Catalog No. NR-49424**

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

**Product Description:**

NR-49424 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. The recombinant ESAT-6 protein was expressed in *Escherichia coli* BL21 (DE3) pLysS cells transformed with BEI Resources NR-50170 lot 64034836 and purified by immobilized-metal affinity chromatography and lyophilized. ESAT-6 has a theoretical molecular weight of approximately 11 kDa.

**Lot: 70016782**

**Manufacturing Date: 10AUG2018**

TEST	SPECIFICATIONS	RESULTS
<b>Appearance</b>	Report results	White, fluffy powder
<b>SDS-PAGE</b>	Protein band of interest represents > 90% of total staining intensity	Dominant band of ~ 10 kDa accounts for > 90% of total staining intensity (Figure 1)
<b>Concentration by Bicinchoninic Acid Protein Assay<sup>1</sup></b>	Report results	1.2 mg per mL
<b>Final Product</b> Quantity per vial Volume per vial	Report results Report results	1.2 mg 1 mL
<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	12.7 EU/mg protein
<b>Filtration</b>	0.2 µm sterile-filtered	0.2 µm sterile-filtered

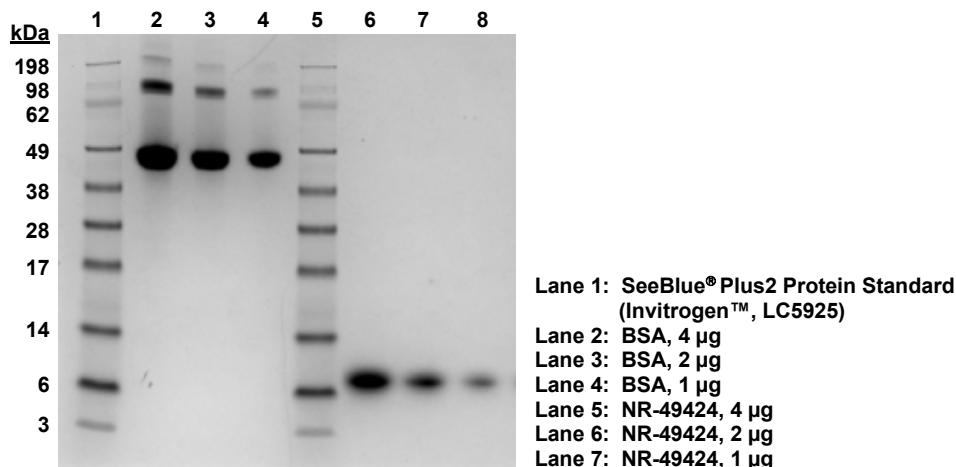
<sup>1</sup>Using bovine serum albumin (BSA) as a standard

<sup>2</sup>Polyclonal Anti-*Mycobacterium tuberculosis* ESAT-6 (antiserum, Rabbit) (BEI Resources NR-13803) (1:1000 dilution)

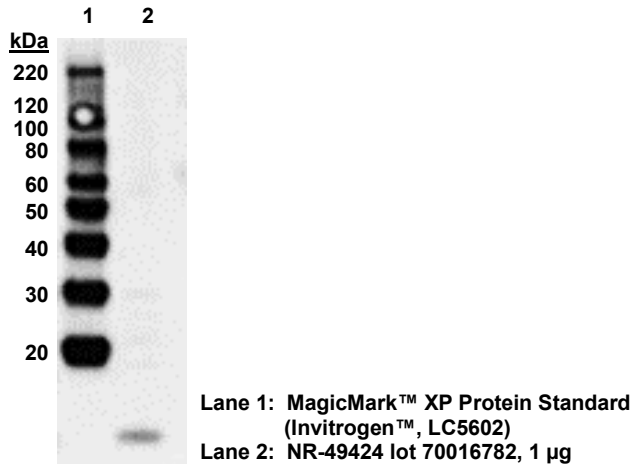
<sup>3</sup>His Tag Antibody (R&D Systems, MAB050) (1:1,000 dilution)

<sup>4</sup>Endosafe® nexgen-PTS™ (Charles River, PTS20F)

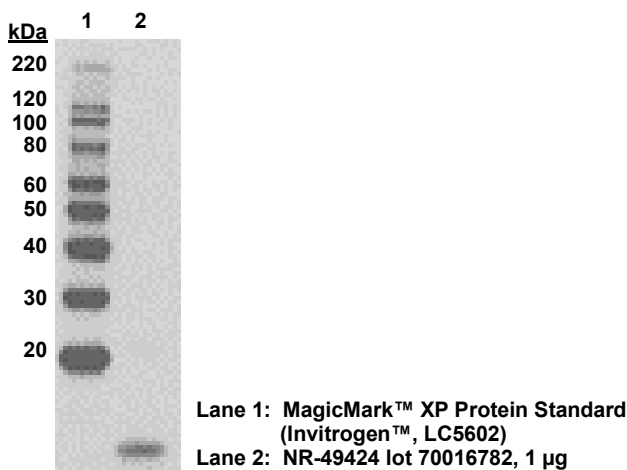
**Figure 1: SDS-PAGE and Silver Stain**



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



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



/Heather Couch/  
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Program Manager or designee, ATCC Federal Solutions

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