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## Product Data Sheet

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Product Name: ESAT6  
 Cat. No.: GP23419  
 Batch No.: 1

### Product Data

Purity	>98%	Source	Baculovirus.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Early Secretory Target Mycobacterium Tuberculosis; ESAT-6.		
Amino Acid Sequence	ADPMTEQQWN FAGIEAAASA IQGNVTSIHS LLDEGKQSLT KLAAAWGGSG SEAYQGVQQK WDATATELNN ALQNLARTIS EAGQAMASTE GNVTGMFAHH HHHH.		
Formulation	ESAT-6 protein solution (0.5mg/ml) containing 20mM Tris-HCl buffer (pH 8.0) and 10% glycerol.		

### Introduction

Mycobacterium antigen ESAT-6 has been isolated from low molecular weight fractions of the short-term-culture filtrate (ST-CF) and it can easily be detected in tuberculosis patients. The export of ESAT-6 which is a potent T-cell antigen, and related proteins requires a dedicated secretory apparatus that is encoded by a group of genes, several of which also code for proteins that are recognized strongly by T cells. The ESAT-6 systems can consequently be considered as immunogenicity islands and there is mounting evidence that the equivalent genes are subject to selective pressure imposed by the immune system of the host. This antigen includes many epitopes detectable in the serum of most patients with tuberculosis (more than 90%). By the attempts to obtain the vaccine on the basis of ESAT-6 it was demonstrated that the optimization of adjuvant is very important when using the combination of dioctadecylammonium bromide and monophosphoryllipide. Recently it was shown that ESAT-6 is very potential as diagnostic for differentiation between the mycobacterial infection and BCG vaccination. The main topic in ESAT-6 using is in antibody production and in test-systems for tuberculosis elaboration.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store frozen at -20°C for longer

**Caution: Product has not been fully validated for medical applications. For research use only.**

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periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

ESAT-6 Recombinant produced in Baculovirus is a single, glycosylated, polypeptide chain containing 104 amino acids (1-95 a.a) having a total molecular mass of 11kDa. The ESAT-6 fused to a 6 amino acid His-tag & purified by proprietary chromatographic techniques.

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