



## RayBiotech, Inc.

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# Certificate of Analysis and Data Sheet

## Recombinant Mycobacterium Tuberculosis Heat Shock Protein 65

**Catalog No.**

228-10791

**Source:**

*Escherichia Coli*

**Synonyms**

Protein Cpn60-2, groEL protein-2, 65 kDa antigen, Heat shock protein 65, Cell wall protein A, Antigen A, groL2, groEL-2.

**Introduction**

Heat shock proteins induce pro-inflammatory cytokines. Mycobacterial HSPs participate in cytokine expression resulting from infection by *M. tuberculosis*. Furthermore, HSPs stabilize cellular proteins in response to various sources of stress or injury. HSP65 is one of the most essential defending immunogens against the tuberculosis infection. HSP65 is presented to human CD41 T cells in association with multiple HLA-DR molecules. The *M. tuberculosis* HSP65 signals through TLR4.

**Description**

Recombinant Mycobacterium Tuberculosis HSP65 is produced in *E. coli* and has a Mw of 57.4 kDa. The HSP65 protein is fused to His-Tag at N-Terminus and purified by standard chromatography techniques.

**Physical Appearance**

Sterile Filtered White lyophilized (freeze-dried) powder.

**Formulation**

The HSP65 protein was lyophilized from a concentrated (1mg/ml) solution containing 10mM Na-phosphate pH-7.4, 130mM NaCl and 2.5mM KCl.

**Solubility**

It is recommended to reconstitute the lyophilized HSP-65 in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

**Purity**

Greater than 95.0% as determined by

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***Stability***

Lyophilized HSP65 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution HSP65 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Please prevent freeze-thaw cycles.**

### ***Amino Acid Sequence***

HHHHHHGSAKTIA YDEEARRGLERGLNALADAVKV  
TLGPKGRNVVLEKKWGAPTITNDGV SIAKEIELEDPY  
EKIGAELVKEVAKKTDDVAGDGTTTATVLAQALVRE  
GLRNVAAGANPLGLKRGIEAVEKVTETLLKGAKET  
KEQIAATAAISAGDQSIGDLIAEAMDKVGNEGVITV  
EESNTFGLQLELTEGMRFDKGYISGYFVTDPERQEAV  
LEDPYILLVSSKVSTVKDLLPLEKVIGAGKPLLIEDVEGE  
ALSTLVVNKIRGTFKSVAVKAPGFGDRRKAMLQDMAIL  
TGGQVISEEVGLTLENADLSLLGKARKVVVTKDETTIVE  
GAGDTDAIAGRVAQIRQEIENS DSDYDREKLQERLAKL  
AGGVAVKAGAATEVELKERKHRIEDAVRNAKAAVEEGIV  
AGGGVTLLQAAPTLDLDELKLEGDEATGANIVKVALEAPL  
KQIAFN SGLPGVVAEKVRNLPAGHGLNAQTGVYEDLLA  
AGVADPVKVTRSA LQNASIAGLFLTTEAVVADKPEKEKASVPGGGDMGGMDF.

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