



## RayBiotech, Inc.

3607 Parkway Lane suite 200  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)

### Certificate of Analysis and Data Sheet

## Recombinant Human Alpha Hemoglobin Stabilizing Protein

**Catalog No.**  
228-10034

**Source**  
*E.Coli*

### Synonyms

Alpha-hemoglobin-stabilizing protein, Erythroid-associated factor, Erythroid differentiation-related factor, AHSP, EDRF, ERAF.

### Introduction

Alpha-hemoglobin stabilizing protein (AHSP) is an erythroid-specific protein that acts as a chaperone to prevent the aggregation of  $\alpha$ -hemoglobin during normal erythroid cell development. AHSP specifically protects free  $\alpha$ -hemoglobin from precipitation in live cells and in solution. AHSP is expected to modulate pathological states of alpha-hemoglobin excess such as beta-thalassemia. Furthermore, AHSP promotes alpha globin chain stability in human erythropoiesis. In addition, the AHSP stabilizes the alpha-Hb chain, thus avoiding its precipitation and its ability to generate ROS, which is implicated in cell death. AHSP is expressed in blood and bone marrow. AHSP subunit is a monomer, it forms a heterodimer with free alpha-hemoglobin. On the other hand, AHSP does not bind beta-hemoglobin nor alpha<sub>2</sub>beta<sub>2</sub> hemoglobin A. AHSP is downregulated in TSEs (transmissible spongiform encephalopathies).

### Description

AHSP Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 102 amino acids (1-102 a.a.) and having a molecular mass of 11.8kDa. The AHSP is purified by proprietary chromatographic techniques.

### Physical Appearance

Sterile Filtered colorless solution.

### Formulation

The AHSP protein solution contains 20mM Tris-HCl buffer (pH8.0) and 10% glycerol.

### Stability

AHSP although stable 4°C for 4 weeks, should be stored desiccated 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.**

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



## RayBiotech, Inc.

3607 Parkway Lane suite 200  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)

---

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

MALLKANKDL ISAGLKEFSV LLNQQVFNDP LVSEEDMVTV VEDWMNFYIN  
YYRQQVTGEP QERDKALQEL RQELNTLANP FLAKYRDFLK SHELP SHPPP SS.

### ***Purity***

Greater than 95.0% as determined by SDS-PAGE.

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