AHSP (FL-102): sc-292377



The Power to Question

BACKGROUND

 α -hemoglobin stabilizing protein (AHSP), also designated erythroid associated factor (ERAF), is an erythroid-specific protein that acts as a chaperone to prevent the aggregation of α -hemoglobin during normal erythroid cell development. It specifically protects free α -hemoglobin from precipitation in live cells and in solution. It forms a heterodimer with free α -hemoglobin, but not with β -hemoglobin or hemoglobin A (α 2- β -2). AHSP localizes to the cytoplasm and is expressed in the blood and bone marrow. The AHSP protein is downregulated in transmissible spongiform encephalopathies (TSEs). AHSP may regulate pathological states of α -hemoglobin excess such as β -thalassemia, a group of hereditary disorders involving the decreased production of normal adult hemoglobin (HbA) that are characterized by a deficiency in the synthesis of β -globin chains.

REFERENCES

- Zhang, Q.H., et al. 2000. Cloning and functional analysis of cDNAs with open reading frames for 300 previously undefined genes expressed in CD34+ hematopoietic stem/progenitor cells. Genome Res. 10: 1546-1560.
- 2. Miele, G., et al. 2001. A novel erythroid-specific marker of transmissible spongiform encephalopathies. Nat. Med. 7: 361-364.
- Kihm, A.J., et al. 2002. An abundant erythroid protein that stabilizes free α-haemoglobin. Nature 417: 758-763.
- 4. Gell, D., et al. 2002. Biophysical characterization of the α -globin binding protein α -hemoglobin stabilizing protein. J. Biol. Chem. 277: 40602-40609.
- 5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605821. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 6. dos Santos, C.O., et al. 2005. AHSP and β -thalassemia: a possible genetic modifier. Hematology 10: 157-161.
- 7. Gallagher, P.G., et al. 2005. GATA-1 and Oct-1 are required for expression of the human α -hemoglobin-stabilizing protein gene. J. Biol. Chem. 280: 39016-39023.
- 8. Gawronski, J., et al. 2005. Conformational response of tartaric acid to derivatization: role of 1,3-dipole-dipole interactions. Chirality 17: 388-395.

CHROMOSOMAL LOCATION

Genetic locus: AHSP (human) mapping to 16p11.2.

SOURCE

AHSP (FL-102) is a rabbit polyclonal antibody raised against amino acids 1-102 representing full length AHSP of human origin.

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

AHSP (FL-102) is recommended for detection of AHSP of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AHSP siRNA (h): sc-60137, AHSP shRNA Plasmid (h): sc-60137-SH and AHSP shRNA (h) Lentiviral Particles: sc-60137-V.

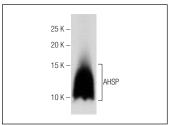
Molecular Weight of AHSP: 12 kDa.

Positive Controls: Human PBL whole cell lysate.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



AHSP (FL-102): sc-292377. Western blot analysis of AHSP expression in human PBL whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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