SANTA CRUZ BIOTECHNOLOGY, INC.

# AHSP (G-5): sc-515189

SANTA CRUZ BIOTECHNOLOGY

*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 (α2-β-2). AHSP localizes to the cytoplasm and is expressed in the blood and bone marrow. The AHSP protein is down-regulated 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


1. 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.
3. 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/


## CHROMOSOMAL LOCATION

Genetic locus: AHSP (human) mapping to 16p11.2; Ahsp (mouse) mapping to 7 F3.

## SOURCE

AHSP (G-5) is a mouse monoclonal antibody raised against amino acids 1-102 representing full length AHSP of mouse origin.

## PRODUCT

Each vial contains 200 µg $IgG_{2a}$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AHSP (G-5) is available conjugated to agarose (sc-515189 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515189 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515189 PE), fluorescein (sc-515189 FITC), Alexa Fluor® 488 (sc-515189 AF488), Alexa Fluor® 546 (sc-515189 AF546), Alexa Fluor® 594 (sc-515189 AF594) or Alexa Fluor® 647 (sc-515189 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515189 AF680) or Alexa Fluor® 790 (sc-515189 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.



## APPLICATIONS

AHSP (G-5) is recommended for detection of AHSP of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 siRNA (m): sc-60138, AHSP shRNA Plasmid (h): sc-60137-SH, AHSP shRNA Plasmid (m): sc-60138-SH, AHSP shRNA (h) Lentiviral Particles: sc-60137-V and AHSP shRNA (m) Lentiviral Particles: sc-60138-V.

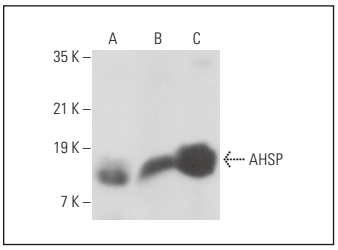
Molecular Weight of AHSP: 12 kDa.

Positive Controls: mouse bone marrow extract: sc-394627, human bone marrow extract: sc-363752 or mouse PBL whole cell lysate.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




AHSP (G-5): sc-515189. Western blot analysis of AHSP expression in mouse PBL whole cell lysate (**A**) and mouse bone marrow (**B**) and human bone marrow (**C**) tissue extracts.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

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