SANTA CRUZ BIOTECHNOLOGY, INC.

Hemogen (H-1): sc-514789

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hemogen (hemopoietic gene protein, erythroid differentiation-associated gene protein) is a 484 amino acid protein encoded by the human gene HEMGN. Hemogen is a nuclear protein that is expressed in hematopoietic precursor cells and can be detected in $CD34^+$ and K-562 leukemia cell line. It is also expressed in bone marrow, testis, thymus and thyroid tumors, non-Hodgkin lymphoma, various leukemia cell lines, peripheral blood mononuclear cells (PBMCs) and bone marrow mononuclear cells (BMMCs) of patients with leukemia. Hemogen is down-regulated during megakaryocytic differentiation of K-562 cells by 12-O-tetradecanoylphorbol-13-acetate (TPA) (at protein level). It can be up-regulated in normal PBMCs by mitogens.

REFERENCES

1. Yang, L.V., et al. 2001. Hemogen is a novel nuclear factor specifically expressed in mouse hematopoietic development and its human homologue EDAG maps to chromosome 9q22, a region containing breakpoints of hematological neoplasms. Mech. Dev. 104: 105-111.
2. Lü, J., et al. 2002. Isolation and characterization of EDAG-1, a novel gene related to regulation in hematopoietic system. Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao 33: 641-646.
3. Lü, J., et al. 2002. Overexpression of EDAG-1 in NIH3T3 cells leads to malignant transformation. Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao 34: 95-98.
4. Yang, L.V., et al. 2003. Alternative promoters and polyadenylation regulate tissue-specific expression of Hemogen isoforms during hematopoiesis and spermatogenesis. Dev. Dyn. 228: 606-616.
5. Li, C.Y., et al. 2004. EDAG regulates the proliferation and differentiation of hematopoietic cells and resists cell apoptosis through the activation of nuclear factor-κB. Cell Death Differ. 11: 1299-1308.
6. An, L.L., et al. 2005. High expression of EDAG and its significance in AML. Leukemia 19: 1499-1502.
7. Yang, L.V., et al. 2006. The GATA site-dependent hemogen promoter is transcriptionally regulated by GATA1 in hematopoietic and leukemia cells. Leukemia 20: 417-425.

CHROMOSOMAL LOCATION

Genetic locus: HEMGN (human) mapping to 9q22.33; Hemgn (mouse) mapping to 4 B1.

SOURCE

Hemogen (H-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 370-395 within an internal region of Hemogen of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514789 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Hemogen (H-1) is recommended for detection of Hemogen 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 Hemogen siRNA (h): sc-61859, Hemogen siRNA (m): sc-61860, Hemogen shRNA Plasmid (h): sc-61859-SH, Hemogen shRNA Plasmid (m): sc-61860-SH, Hemogen shRNA (h) Lentiviral Particles: sc-61859-V and Hemogen shRNA (m) Lentiviral Particles: sc-61860-V.

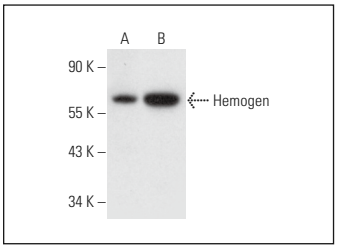
Molecular Weight of Hemogen: 55 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, K-562 nuclear extract: sc-2130 or RT-4 whole cell lysate: sc-364257.

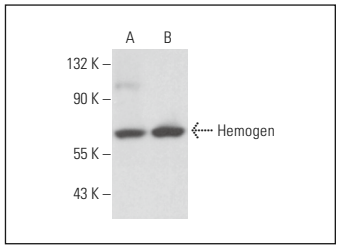
RECOMMENDED SUPPORT REAGENTS

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



Hemogen (H-1): sc-514789. Western blot analysis of Hemogen expression in Jurkat nuclear extract (**A**) and RT-4 whole cell lysate (**B**).



Hemogen (H-1): sc-514789. Western blot analysis of Hemogen expression in K-562 (**A**) and HEL 92.1.7 (**B**) nuclear extracts.

RESEARCH USE

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