

# Hemogen (D-4): sc-393386

## 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. 2001. 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- $\kappa$ B. *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 (D-4) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of Hemogen of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain 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

Hemogen (D-4) 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  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

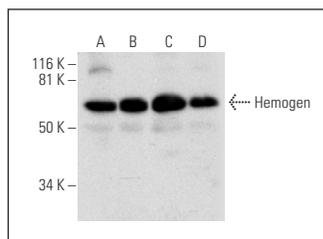
Molecular Weight of Hemogen: 55 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, Jurkat nuclear extract: sc-2132 or HEL 92.1.7 cell lysate: sc-2270.

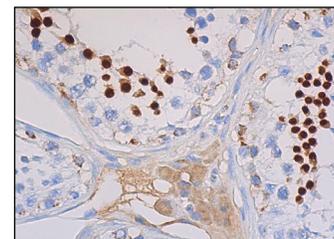
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



Hemogen (D-4): sc-393386. Western blot analysis of Hemogen expression in K-562 (A), Jurkat (B), HEL 92.1.7 (C) and MEG-01 (D) nuclear extracts.



Hemogen (D-4): sc-393386. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing nuclear staining of subset of cells in seminiferous ducts.

## 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](http://www.scbt.com) for detailed protocols and support products.