

# Hemogen (Y-20): sc-66242

## 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<sup>+</sup> and the 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 downregulated during megakaryocytic differentiation of K-562 cells by 12-O-tetradecanoylphorbol-13-acetate (TPA) (at protein level). It can be upregulated in normal PBMCs by mitogens.

## REFERENCES

1. Yang, L.V., Nicholson, R.H., Kaplan, J., Galy, A. and Li, L. 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., Xu, W.X., Wang, S.Y., Zhan, Y.Q., Jiang, Y., Cai, W.M. and Yang, X.M. 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., Xu, W.X., Wang, S.Y., Jiang, Y., Li, C.Y., Cai, W.M. and Yang, X.M. 2002. Overexpression of EDAG-1 in NIH/3T3 cells leads to malignant transformation. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 34: 95-98.
4. Yang, L.V., Heng, H.H., Wan, J., Southwood, C.M., Gow, A. and Li, L. 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., Zhan, Y.Q., Xu, C.W., Xu, W.X., Wang, S.Y., Lv, J., Zhou, Y., Yue, P.B., Chen, B. and Yang, X.M. 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.

## CHROMOSOMAL LOCATION

Genetic locus: HEMGN (human) mapping to 9q22.33.

## SOURCE

Hemogen (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Hemogen of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-66242 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

Hemogen (Y-20) is recommended for detection of Hemogen of human origin by Western Blotting (starting dilution 1:200, 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) 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 shRNA Plasmid (h): sc-61859-SH and Hemogen shRNA (h) Lentiviral Particles: sc-61859-V.

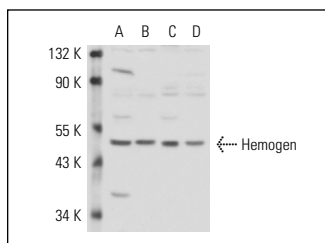
Molecular Weight of Hemogen: 55 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MEG-01 nuclear extract: sc-2150 or Jurkat nuclear extract: sc-2132.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Hemogen (Y-20): sc-66242. Western blot analysis of Hemogen expression in K-562 (A), HEL 92.1.7 (B), Jurkat (C) and MEG-01 (D) nuclear extracts.

## STORAGE

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

**MONOS**  
Satisfaction  
Guaranteed

Try **Hemogen (H-1): sc-514789** or **Hemogen (C-7): sc-393416**, our highly recommended monoclonal alternatives to Hemogen (Y-20).