

HEG1 (N-13): sc-102592

BACKGROUND

HEG1 (HEG homolog 1) is also known as HEG and is a 1,381 amino acid protein that exists as 2 alternatively spliced isoforms, one of which is a single-pass membrane protein and the other of which is secreted. HEG1, which is expressed in endothelial cells and smooth muscle cells of heart tissue, contains two EGF-like domains that play a role in calcium-binding events which may regulate concentric heart growth. The gene encoding HEG1 maps to human chromosome 3, which houses over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B. Marfan dyndrome, porphyria, von Hippel-Lindau syndrome, osteogenesis imperfecta and Charcot-Marie-Tooth disease are a few of the numerous genetic diseases associated with chromosome 3.

REFERENCES

- Mably, J.D., et al. 2003. heart of glass regulates the concentric growth of the heart in zebrafish. *Curr. Biol.* 13: 2138-2147.
- Bortvin, A., et al. 2003. Incomplete reactivation of Oct4-related genes in mouse embryos cloned from somatic nuclei. *Development* 130: 1673-1680.
- Braga, E.A., et al. 2003. New tumor suppressor genes in hot spots of human chromosome 3: new methods of identification. *Mol. Biol.* 37: 194-211.
- Mably, J.D., et al. 2006. santa and valentine pattern concentric growth of cardiac myocardium in the zebrafish. *Development* 133: 3139-3146.
- Picelli, S., et al. 2008. Genome-wide linkage scan for colorectal cancer susceptibility genes supports linkage to chromosome 3q. *BMC Cancer* 8: 87.
- Wilting, S.M., et al. 2008. Integrated genomic and transcriptional profiling identifies chromosomal loci with altered gene expression in cervical cancer. *Genes Chromosomes Cancer* 47: 890-905.
- Birch, A.H., et al. 2008. Transcriptome analysis of serous ovarian cancers identifies differentially expressed chromosome 3 genes. *Mol. Carcinog.* 47: 56-65.

CHROMOSOMAL LOCATION

Genetic locus: HEG1 (human) mapping to 3q21.2.

SOURCE

HEG1 (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of HEG1 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.

PROTOCOLS

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

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-102592 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HEG1 (N-13) is recommended for detection of HEG1 of human origin by Western Blotting (starting dilution 1:200, 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 HEG1 siRNA (h): sc-78365, HEG1 shRNA Plasmid (h): sc-78365-SH and HEG1 shRNA (h) Lentiviral Particles: sc-78365-V.

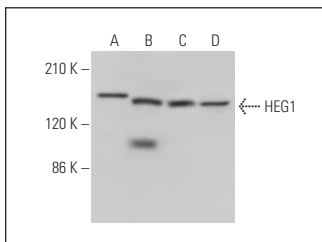
Molecular Weight of HEG1: 147 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or Hep G2 cell lysate: sc-2227.

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



HEG1 (N-13): sc-102592. Western blot analysis of HEG1 expression in HeLa (A), K-562 (B) and Hep G2 (C) whole cell lysates and human testis tissue extract (D).

RESEARCH USE

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