SANTA CRUZ BIOTECHNOLOGY, INC.

HDGF (H-3): sc-398344

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hepatoma derived growth factor (HDGF) is the original member of a family of polypeptides designated HDGF-related proteins (HRPs). HDGF was initially characterized as a secreted mitogen from the Huh-7 human hepatoma cell line. This nuclear targeted vascular smooth muscle (VSM) cell mitogen is a heparin-binding protein that is highly expressed in tumor cells where it stimulates proliferation. HDGF is also reported to be involved in organ development and lung remodeling after injury by promoting proliferation of lung epithelial cells. During development, HDGF expression is high in the nucleus and cytoplasm of smooth muscle and endothelial cells. Expression declines after birth but increases during vascular injury.

REFERENCES

1. Everett, A.D., et al. 2001. Nuclear targeting is required for hepatoma-derived growth factor-stimulated mitogenesis in vascular smooth muscle cells. J. Biol. Chem. 276: 37564-37568.
2. Dietz, F., et al. 2002. The family of hepatoma-derived growth factor proteins: characterization of a new member HRP-4 and classification of its subfamilies. Biochem. J. 366: 491-500.
3. Enomoto, H., et al. 2002. Hepatoma-derived growth factor is highly expressed in developing liver and promotes fetal hepatocyte proliferation. Hepatology 36: 1519-1527.
4. Everett, A.D., et al. 2003. Hepatoma derived growth factor is a nuclear targeted mitogen. Curr. Drug Targets 4: 367-371.
5. Okuda, Y., et al. 2003. Hepatoma-derived growth factor induces tumorigenesis *in vivo* through both direct angiogenic activity and induction of vascular endothelial growth factor. Cancer Sci. 94: 1034-1041.
6. Bernard, K., et al. 2003. Functional proteomic analysis of melanoma progression. Cancer Res. 63: 6716-6725.

CHROMOSOMAL LOCATION

Genetic locus: HDGF (human) mapping to 1q23.1; Hdgf (mouse) mapping to 3 F1.

SOURCE

HDGF (H-3) is a mouse monoclonal antibody raised against amino acids 121-168 mapping within an internal region of HDGF of human origin.

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.

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 for detailed protocols and support products.

APPLICATIONS

HDGF (H-3) is recommended for detection of HDGF 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 HDGF siRNA (h): sc-45878, HDGF siRNA (m): sc-45879, HDGF shRNA Plasmid (h): sc-45878-SH, HDGF shRNA Plasmid (m): sc-45879-SH, HDGF shRNA (h) Lentiviral Particles: sc-45878-V and HDGF shRNA (m) Lentiviral Particles: sc-45879-V.

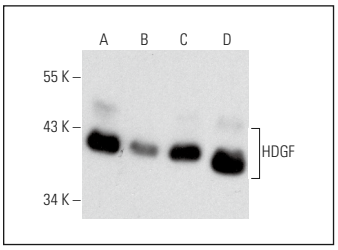
Molecular Weight of HDGF: 40 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Hep G2 cell lysate: sc-2227 or MCF7 whole cell lysate: sc-2206.

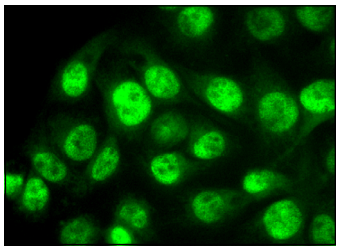
RECOMMENDED SUPPORT REAGENTS

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



HDGF (H-3): sc-398344. Western blot analysis of HDGF expression in MCF7 (**A**), ECV304 (**B**), Hep G2 (**C**) and KNRK (**D**) whole cell lysates.



HDGF (H-3): sc-398344. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Zhu, W., et al. 2018. MicroRNA-425 is downregulated in nasopharyngeal carcinoma and regulates tumor cell viability and invasion by targeting hepatoma-derived growth factor. Oncol. Lett. 15: 6345-6351.

RESEARCH USE

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