SANTA CRUZ BIOTECHNOLOGY, INC.

HPA1 (L-19): sc-26136

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Heparanases (HPA) degrade heparan sulfate side chains of heparan sulfate proteoglycans (HSPGs) in the extracellular matrix and play animportant role in the extravasation of blood-borne tumor cells and inflammatory leukocytes. HPA1 dismantles the subendothelial basal membrane and facilitates the metastasis of blood-borne tumor cells. Furthermore, HPA1 induces angiogenesis and likely promotes the vascularization of tumors. Upon degradation, HPAs free growth factors and cytokines that stimulate cell proliferation and chemotaxis. Fibroblasts endocytose extracellular HPA1 for cytoplasmic accumulation *in vitro*. Proteolytic processing at the cell surface of a precursor begets an active form of HPA1. The gene encoding human HPA1 maps to chromosome 4q21.23

REFERENCES

1. Vlodavsky, I., et al. 1983. Lymphoma cell mediated degradation of sulfated proteoglycans in the subendothelial extracellular matrix: relationship to tumor cell metastasis. Cancer Res. 43: 2704-2711.
2. Bashkin, P., et al. 1989. Basic fibroblast growth factor binds to subendothelial extracellular matrix and is released by heparitinase and heparin-like molecules. Biochemistry 28: 1737-1743.
3. Vlodasvsky, I., et al. 1990. Extracellular matrix-resident growth factors and enzyme: possible involvement in tumor metatstasis and angiogenesis. Cancer Metastasis Rev. 9: 203-226.
4. Vlodavsky, I., et al. 1992. Expression of heparanase by platelets and circulating cells of the immune system: possible involvement in diapedesis and extravasation. Invasion Metastasis 12: 112-127.
5. Baker, E., et al. 1999. Human HPA endoglycosidase heparanase. Map position 4q21.3. Chromosome Res. 7: 319.
6. Dempsey, L.A., et al. 2000. Heparanase, a potential regulator of cell-matrix interactions. Trends Biochem. Sci. 25: 349-351.
7. Vlodavsky, I., et al. 2001. Properties and function of heparanase in cancer metastasis and angiogenesis. Haemostasis 31 Suppl. 1: 60-63.
8. Nadav, L., et al. 2002. Activation, processing and trafficking of extracellular heparanase by primary human fibroblasts. J. Cell Sci. 115: 2179-2187

CHROMOSOMAL LOCATION

Genetic locus: HPSE (human) mapping to 4q21.23.

SOURCE

HPA1 (L-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of heparanase 1 of human origin.

Manufactured by Santa Cruz Biotechnology, Inc. under license from Insight Biopharmaceuticals Ltd.

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 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26136 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HPA1 (L-19) is recommended for detection of heparanase 1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 HPA1 siRNA (h): sc-40685, HPA1 shRNA Plasmid (h): sc-40685-SH and HPA1 shRNA (h) Lentiviral Particles: sc-40685-V.

Molecular Weight of HPA1 precusor: 65 kDa.

Molecular Weight of proteolytically processed highly active HPA1: 50 kDa.

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) 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.

RESEARCH USE

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

PROTOCOLS

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