SANTA CRUZ BIOTECHNOLOGY, INC.

HYAL1 (F-10): sc-514634

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hyaluronidases (HAases or HYALs) are a family of lysosomal enzymes that are crucial for the spread of bacterial infections and of toxins present in a variety of venoms. HYALs may also be involved in the progression of cancer. In humans, six HYAL proteins have been identified. Most HYAL proteins degrade hyaluronic acid (HA), which is present in body fluids, tissues and the extracellular matrix of vertebrate tissues. HA keeps tissues hydrated, maintains osmotic balance and promotes cell proliferation, differentiation and metastasis. HA is also an important structural component of cartilage and other tissues and acts as a lubricant in joints. HYAL1 is a 435 amino acid hyaluronidase that is is expressed in multiple tissues, specifically in the serum, and is not expressed in brain. HYAL1 degrades HA into into fragments that stimulate angiogenesis. Expression of HYAL1 in various cancer cells may have a role in the regulation of tumor growth and progression.

REFERENCES

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2. Shuttleworth, T.L., Wilson, M.D., Wicklow, B.A., Wilkins, J.A. and Triggs-Raine, B.L. 2002. Characterization of the murine hyaluronidase gene region reveals complex organization and cotranscription of Hyal1 with downstream genes, Fus2 and Hyal3. J. Biol. Chem. 277: 23008-23018.
3. Franzmann, E.J., Schroeder, G.L., Goodwin, W.J., Weed, D.T., Fisher, P. and Lokeshwar, V.B. 2003. Expression of tumor markers hyaluronic acid and hyaluronidase (HYAL1) in head and neck tumors. Int. J. Cancer 106: 438-445.
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5. Isoyama, T., Thwaites, D., Selzer, M.G., Carey, R.I., Barbucci, R. and Lokeshwar, V.B. 2005. Differential selectivity of hyaluronidase inhibitors toward acidic and basic hyaluronidases. Glycobiology 16: 11-21.

CHROMOSOMAL LOCATION

Genetic locus: HYAL1 (human) mapping to 3p21.31.

SOURCE

HYAL1 (F-10) is a mouse monoclonal antibody raised against amino acids 384-435 mapping at the C-terminus of HYAL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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.

APPLICATIONS

HYAL1 (F-10) is recommended for detection of HYAL1 of 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 HYAL1 siRNA (h): sc-78054, HYAL1 shRNA Plasmid (h): sc-78054-SH and HYAL1 shRNA (h) Lentiviral Particles: sc-78054-V.

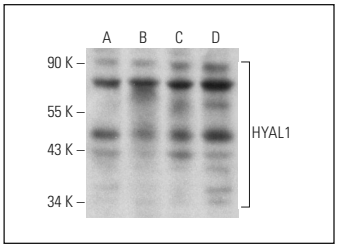
Molecular Weight of HYAL1: 60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, LNCaP cell lysate: sc-2231 or DU 145 cell lysate: sc-2268.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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 goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



HYAL1 (F-10): sc-514634. Western blot analysis of HYAL1 expression in HeLa (**A**), Hep G2 (**B**), LNCaP (**C**) and DU 145 (**D**) whole cell lysates.

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.