



HYAL1 (N-17): sc-49202

BACKGROUND

Hyaluronidases (HAases or HYAL) are a family of lysosomal enzymes that are crucial for the spread of bacterial infections, toxins present in various venoms and, possibly, cancer progression. 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 expressed in multiple tissues, but not in brain, and it is specifically present in the serum. HYAL1 degrades HA into fragments that stimulate angiogenesis, so its expression in various cancer cells may have a role in the regulation of tumor growth and progression.

REFERENCES

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3. Franzmann, E.J., et al. 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., et al. 2005. Differential selectivity of hyaluronidase inhibitors toward acidic and basic hyaluronidases. *Glycobiology* 16: 11-21.
6. Jedrzejewski, M.J., et al. 2005. Structures of vertebrate hyaluronidases and their unique enzymatic mechanism of hydrolysis. *Proteins* 61: 227-238.
7. Lokeshwar, V.B., et al. 2005. HYAL1 hyaluronidase: a molecular determinant of bladder tumor growth and invasion. *Cancer Res.* 65: 2243-2250.
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CHROMOSOMAL LOCATION

Genetic locus: SPAM1 (human) mapping to 7q31.3; Spam1 (mouse) mapping to 6 A2.

SOURCE

HYAL1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HYAL1 of human origin.

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-49202 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HYAL1 (N-17) is recommended for detection of HYAL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for HYAL1 siRNA (h): sc-60822.

Molecular Weight of HYAL1: 60 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.

STORAGE

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

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.