HYAL3 (N-12): sc-49211



The Power to Question

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. In humans, six HYAL proteins have been identified. HYAL proteins use hydrolysis to 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 acts as a lubricant in joints. HYAL3 is a 417 amino acid protein that is highly expressed in testis and bone marrow, but has relatively low expression in all other tissues. Unlike HYAL1 and HYAL2, HYAL3 is an unlikely tumor supressor candidate, given the lack of detected mutations in its gene.

REFERENCES

- Sun, L., Feusi, E., Sibalic, A., Beck-Schimmer, B. and Wüthrich, R.P. 1999. Expression profile of hyaluronidase mRNA transcripts in the kidney and in renal cells. Kidney Blood Press. Res. 21: 413-418.
- Triggs-Raine, B., Salo, T.J., Zhang, H., Wicklow, B.A. and Natowicz, M.R. 1999. Mutations in HYAL1, a member of a tandemly distributed multigene family encoding disparate hyaluronidase activities, cause a newly described lysosomal disorder, mucopolysaccharidosis IX. Proc. Nat. Acad. Sci. USA 96: 6296-6300.
- Csoka, A.B., Frost, G.I. and Stern, R. 2001. The six hyaluronidase-like genes in the human and mouse genomes. Matrix Biol. 20: 499-508.
- 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.
- Online Mendelian Inheritance in Man, OMIMTM. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604038. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Gatphayak, K., Knorr, C., Habermann, F., Fries, R. and Brenig, B. 2003. Assignment of the porcine hyaluronidase-3 (HYAL3) gene to SSC13 q21 by FISH and confirmation by hybrid panel analyses. Cytogenet. Genome Res. 101: 178.
- Gatphayak, K., Knorr, C., Beck, J. and Brenig, B. 2004. Molecular characterization of porcine hyaluronidase genes 1, 2, and 3 clustered on SSC13q21. Cytogenet. Genome Res. 106: 98-106.
- 8. Tanimoto, K., Suzuki, A., Ohno, S., Honda, K., Tanaka, N., Doi, T., Nakahara-Ohno, M., Yoneno, K., Nakatani, Y., Ueki, M., Yanagida, T., Kitamura, R. and Tanne, K. 2004. Hyaluronidase expression in cultured growth plate chondrocytes during differentiation. Cell Tissue Res. 318: 335-342.

CHROMOSOMAL LOCATION

Genetic locus: HYAL3 (human) mapping to 3p21.31; Hyal3 (mouse) mapping to 9 F1.

SOURCE

HYAL3 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of HYAL3 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-49211 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HYAL3 (N-12) is recommended for detection of HYAL3 of mouse, rat and 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 HYAL3 siRNA (h): sc-60826, HYAL3 siRNA (m): sc-60827, HYAL3 shRNA Plasmid (h): sc-60826-SH, HYAL3 shRNA Plasmid (m): sc-60827-SH, HYAL3 shRNA (h) Lentiviral Particles: sc-60826-V and HYAL3 shRNA (m) Lentiviral Particles: sc-60827-V.

Molecular Weight of HYAL3: 57 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.



Try **HYAL3 (E-4):** sc-374036 or **HYAL3 (E-11):** sc-377430, our highly recommended monoclonal alternatives to HYAL3 (N-12).

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