

## HYAL3 (H-82): sc-99020

### 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. 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 suppressor candidate, given the lack of detected mutations in its gene.

### REFERENCES

1. Sun, L., et al. 1999. Expression profile of hyaluronidase mRNA transcripts in the kidney and in renal cells. *Kidney Blood Press. Res.* 21: 413-418.
2. Triggs-Raine, B., et al. 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.
3. Csoka, A.B., et al. 2001. The six hyaluronidase-like genes in the human and mouse genomes. *Matrix Biol.* 20: 499-508.
4. Shuttleworth, T.L., et al. 2002. Characterization of the murine hyaluronidase gene region reveals complex organization and co-transcription of Hyal1 with downstream genes, *Fus2* and *Hyal3*. *J. Biol. Chem.* 277: 23008-23018.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604038. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Gatphayak, K., et al. 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.

### CHROMOSOMAL LOCATION

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

### SOURCE

HYAL3 (H-82) is a rabbit polyclonal antibody raised against amino acids 37-118 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.

### STORAGE

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

### APPLICATIONS

HYAL3 (H-82) is recommended for detection of HYAL3 of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, 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).

HYAL3 (H-82) is also recommended for detection of HYAL3 in additional species, including equine.

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 goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### RESEARCH USE

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

### PROTOCOLS

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Try **HYAL3 (E-4): sc-374036** or **HYAL3 (E-11): sc-377430**, our highly recommended monoclonal alternatives to HYAL3 (H-82).