

# HYAL3 (E-11): sc-377430

## 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 HYAL 1 and HYAL2, HYAL3 is an unlikely tumor suppressor candidate, given the lack of detected mutations in its gene.

## REFERENCES

- Sun, L., et al. 1998. Expression profile of hyaluronidase mRNA transcripts in the kidney and in renal cells. *Kidney Blood Press. Res.* 21: 413-418.
- 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. Natl. Acad. Sci. USA* 96: 6296-6300.
- Csoka, A.B., et al. 2001. The six hyaluronidase-like genes in the human and mouse genomes. *Matrix Biol.* 20: 499-508.
- Shuttleworth, T.L., et al. 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, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604038. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- 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.
- Gatphayak, K., et al. 2004. Molecular characterization of porcine hyaluronidase genes 1, 2, and 3 clustered on SSC13q21. *Cytogenet. Genome Res.* 106: 98-106.

## CHROMOSOMAL LOCATION

Genetic locus: HYAL3 (human) mapping to 3p21.31.

## SOURCE

HYAL3 (E-11) is a mouse monoclonal antibody raised against amino acids 37-118 mapping near the N-terminus of HYAL3 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

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

## APPLICATIONS

HYAL3 (E-11) is recommended for detection of HYAL3 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

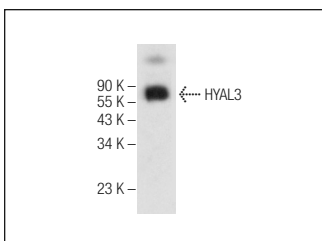
Suitable for use as control antibody for HYAL3 siRNA (h): sc-60826, HYAL3 shRNA Plasmid (h): sc-60826-SH and HYAL3 shRNA (h) Lentiviral Particles: sc-60826-V.

Molecular Weight of HYAL3: 57 kDa.

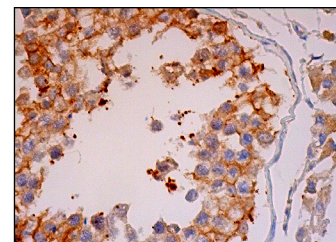
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



HYAL3 (E-11): sc-377430. Western blot analysis of human recombinant HYAL3.



HYAL3 (E-11): sc-377430. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic and membrane staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells.

## SELECT PRODUCT CITATIONS

- Sá, V.K., et al. 2015. Hyaluronidases and hyaluronan synthases expression is inversely correlated with malignancy in lung/bronchial pre-neoplastic and neoplastic lesions, affecting prognosis. *Braz. J. Med. Biol. Res.* 48: 1039-1047.

## STORAGE

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