

HYAL4 (A-7): sc-377369

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. HYAL4 is differentially expressed in placenta and skeletal muscle and contains an N-glycosylation site with tripeptide patterns. HYAL4 may form a complex with HYALP1, HYAL5, and Ph-20.

REFERENCES

1. Csoka, A.B., et al. 1999. Expression analysis of six paralogous human hyaluronidase genes clustered on chromosomes 3p21 and 7q31. *Genomics* 60: 356-361.
2. Fiszler-Szafarz, B., et al. 2000. Human hyaluronidases: electrophoretic multiple forms in somatic tissues and body fluids. Evidence for conserved hyaluronidase potential N-glycosylation sites in different mammalian species. *J. Biochem. Biophys. Methods* 45: 103-116.
3. Csoka, A.B., et al. 2001. The six hyaluronidase-like genes in the human and mouse genomes. *Matrix Biol.* 20: 499-508.
4. Nicoll, S.B., et al. 2002. Hyaluronidases and CD44 undergo differential modulation during chondrogenesis. *Biochem. Biophys. Res. Commun.* 292: 819-825.
5. Kim, E., et al. 2005. Identification of a hyaluronidase, HYAL5, involved in penetration of mouse sperm through cumulus mass. *Proc. Natl. Acad. Sci. USA* 102: 18028-18033.

CHROMOSOMAL LOCATION

Genetic locus: Hyal4 (mouse) mapping to 6 A3.1.

SOURCE

HYAL4 (A-7) is a mouse monoclonal antibody raised against amino acids 162-206 mapping within an internal region of HYAL4 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HYAL4 (A-7) is available conjugated to agarose (sc-377369 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377369 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377369 PE), fluorescein (sc-377369 FITC), Alexa Fluor® 488 (sc-377369 AF488), Alexa Fluor® 546 (sc-377369 AF546), Alexa Fluor® 594 (sc-377369 AF594) or Alexa Fluor® 647 (sc-377369 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377369 AF680) or Alexa Fluor® 790 (sc-377369 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

HYAL4 (A-7) is recommended for detection of HYAL4 of mouse and rat 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 HYAL4 siRNA (m): sc-146116, HYAL4 shRNA Plasmid (m): sc-146116-SH and HYAL4 shRNA (m) Lentiviral Particles: sc-146116-V.

Molecular Weight of HYAL4: 54 kDa.

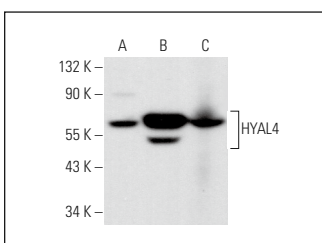
Positive Controls: 3T3-L1 cell lysate: sc-2243, L6 whole cell lysate: sc-364196 or rat heart extract: sc-2393.

RECOMMENDED SUPPORT REAGENTS

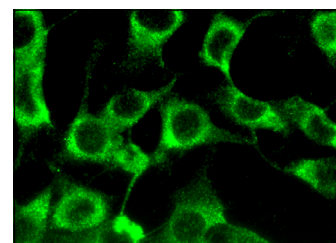
To ensure optimal results, the following support reagents are recommended:

- 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.

DATA



HYAL4 (A-7): sc-377369. Western blot analysis of HYAL4 expression in 3T3-L1 (A) and L6 (B) whole cell lysates and rat heart tissue extract (C).



HYAL4 (A-7): sc-377369. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Yamada, S., et al. 2022. Characterization of hyaluronidase 4 involved in the catabolism of chondroitin sulfate. *Molecules* 27: 6103.

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.