

HAS1 (C-14): sc-23145

BACKGROUND

HAS1, HAS2 and HAS3 are HA synthase proteins that synthesize HA (hyaluronan or hyaluronic acid). The extracellular matrix in most vertebrates express HA, which is a high molecular weight linear polysaccharide composed of alternating glucuronic acid and N-acetylglucosamine residues linked by β -1,3 and β -1,4 glycosidic bonds. The three HAS genes show distinct patterns of expression during development and their protein products play significantly different roles in the formation of the HA matrix. Both HAS1 and HAS2 synthesize high molecular weight HA, whereas HAS3 produces lower molecular weight HA. The expression of the three HAS isoforms is more prominent in growing cells than in resting cells and is differentially regulated by various stimuli, suggesting distinct functional roles of the three proteins. HAS1 mRNA shows predominant expression in bone marrow mesenchymal progenitor cells and synovial cells. The human HAS1 gene maps to chromosome 19q13.41.

CHROMOSOMAL LOCATION

Genetic locus: HAS1 (human) mapping to 19q13.41; Has1 (mouse) mapping to 17 A3.2.

SOURCE

HAS1 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HAS1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515648 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

HAS1 (C-14) is recommended for detection of HAS1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

HAS1 (C-14) is also recommended for detection of HAS1 in additional species, including canine and porcine.

Suitable for use as control antibody for HAS1 siRNA (h): sc-40690, HAS1 siRNA (m): sc-40691, HAS1 shRNA Plasmid (h): sc-40690-SH, HAS1 shRNA Plasmid (m): sc-40691-SH, HAS1 shRNA (h) Lentiviral Particles: sc-40690-V and HAS1 shRNA (m) Lentiviral Particles: sc-40691-V.

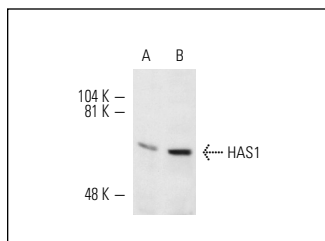
Molecular Weight of HAS1: 66 kDa.

Positive Controls: SW480 cell lysate: sc-2219 or CHO whole cell lysate.

STORAGE

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

DATA



HAS1 (C-14): sc-23145. Western blot analysis of HAS1 expression in SW480 (A) and CHO (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Klagas, I., et al. 2009. Decreased hyaluronan in airway smooth muscle cells from patients with asthma and COPD. *Eur. Respir. J.* 34: 616-628.
- Zhang, L., et al. 2009. Thyrotropin receptor activation increases hyaluronan production in preadipocyte fibroblasts: contributory role in hyaluronan accumulation in thyroid dysfunction. *J. Biol. Chem.* 284: 26447-26455.
- Perry, K., et al. 2012. Cervical expression of hyaluronan synthases varies with the stage of the estrous cycle in the ewe. *Theriogenology* 77: 1100-1110.
- Calve, S., et al. 2012. Hyaluronic acid, HAS1, and HAS2 are significantly upregulated during muscle hypertrophy. *Am. J. Physiol. Cell Physiol.* 303: C577-C588.
- Galloway, J.L., et al. 2013. The control and importance of hyaluronan synthase expression in palatogenesis. *Front. Physiol.* 4: 10.
- Lambert, C., et al. 2014. Gene expression pattern of cells from inflamed and normal areas of osteoarthritis synovial membrane. *Arthritis Rheumatol.* 66: 960-968.

PROTOCOLS

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