

HAS2 (C-5): sc-365263

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 synthesise 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. HAS2 mRNA shows predominant expression in chondrocytes and cartilage. The human HAS2 gene maps to chromosome 8q24.13.

CHROMOSOMAL LOCATION

Genetic locus: HAS2 (human) mapping to 8q24.13; Has2 (mouse) mapping to 15 D1.

SOURCE

HAS2 (C-5) is a mouse monoclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of HAS2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-365263 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HAS2 (C-5) is recommended for detection of HAS2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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 HAS2 siRNA (h): sc-45328, HAS2 siRNA (m): sc-45329, HAS2 shRNA Plasmid (h): sc-45328-SH, HAS2 shRNA Plasmid (m): sc-45329-SH, HAS2 shRNA (h) Lentiviral Particles: sc-45328-V and HAS2 shRNA (m) Lentiviral Particles: sc-45329-V.

Molecular Weight of HAS2: 63 kDa.

Positive Controls: mouse embryo extract: sc-364239.

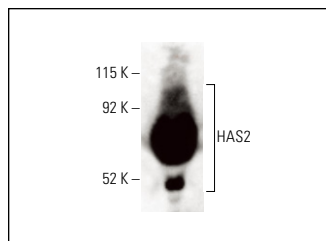
STORAGE

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

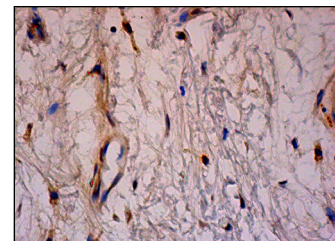
RESEARCH USE

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

DATA



HAS2 (C-5): sc-365263. Western blot analysis of HAS2 expression in human plasma. Detection reagent used: m-IgGκ BP-HRP: sc-516102



HAS2 (C-5): sc-365263. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic staining of hematopoietic and reticular cells.

SELECT PRODUCT CITATIONS

- Day, P.M., et al. 2008. Mechanisms of human papillomavirus type 16 neutralization by I2 cross-neutralizing and I1 type-specific antibodies. *J. Virol.* 82: 4638-4646.
- Ghatak, S., et al. 2014. Periostin induces intracellular cross-talk between kinases and hyaluronan in atrioventricular valvulogenesis. *J. Biol. Chem.* 289: 8545-8561.
- Lim, T.G., et al. 2015. 20-O- β -D-glucopyranosyl-20S-protopanaxadiol, a metabolite of ginsenoside Rb1, enhances the production of hyaluronic acid through the activation of ERK and Akt mediated by Src tyrosin kinase in human keratinocytes. *Int. J. Mol. Med.* 35: 1388-1394.
- Yang, G., et al. 2016. Hyaluronan and hyaluronan synthases expression and localization in embryonic mouse molars. *J. Mol. Histol.* 47: 413-420.
- Liu, S. and Cheng, C. 2017. Akt signaling is sustained by a CD44 splice isoform-mediated positive feedback loop. *Cancer Res.* 77: 3791-3801.
- Li, Q., et al. 2019. Homozygous receptors for Insulin and not IGF-1 accelerate intimal hyperplasia in Insulin resistance and diabetes. *Nat. Commun.* 10: 4427.
- Chen, C.G., et al. 2020. Autophagic degradation of HAS2 in endothelial cells: a novel mechanism to regulate angiogenesis. *Matrix Biol.* 90: 1-19.
- Kapoor, A., et al. 2020. A simplified aortic ring assay: a useful *ex vivo* method to assess biochemical and functional parameters of angiogenesis. *Matrix Biol. Plus* 6-7: 100025.
- Ellert-Miklaszewska, A., et al. 2021. Synthetic cannabinoids induce autophagy and mitochondrial apoptotic pathways in human glioblastoma cells independently of deficiency in TP53 or PTEN tumor suppressors. *Cancers* 13: 419.



See **HAS2 (A-7): sc-514737** for HAS2 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.