

HAS3 (E-15): sc-34204

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. HAS3 produces both secreted and cell-associated forms of hyaluronan and is the most active of the three isoforms of this enzyme in adults. HAS3 gene expression plays a crucial role in the regulation of hyaluronan synthesis in the epidermis. Specifically, IFN- γ markedly upregulates HAS3 mRNA, whereas TGF β down-regulates HAS3 transcript levels. The human HAS3 gene maps to chromosome 16q22.1.

CHROMOSOMAL LOCATION

Genetic locus: HAS3 (human) mapping to 16q22.1; Has3 (mouse) mapping to 8 D3.

SOURCE

HAS3 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of HAS3 of human origin.

PRODUCT

Each vial contains 100 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-34204 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HAS3 (E-15) is recommended for detection of HAS3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

HAS3 (E-15) is also recommended for detection of HAS3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for HAS3 siRNA (h): sc-45295, HAS3 siRNA (m): sc-45296, HAS3 shRNA Plasmid (h): sc-45295-SH, HAS3 shRNA Plasmid (m): sc-45296-SH, HAS3 shRNA (h) Lentiviral Particles: sc-45295-V and HAS3 shRNA (m) Lentiviral Particles: sc-45296-V.

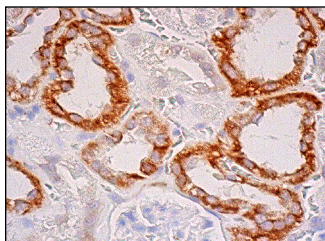
Molecular Weight of HAS3 isoforms: 63/31 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

STORAGE

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

DATA



HAS3 (E-15): sc-34204. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

- Pedersen, C.D., et al. 2009. A comparative study of transfection methods for RNA interference in bone marrow-derived murine dendritic cells. *Scand. J. Immunol.* 70: 447-456.
- Nykopp, T.K., et al. 2010. Hyaluronan synthases (HAS1-3) and hyaluronidases (HYAL1-2) in the accumulation of hyaluronan in endometrioid endometrial carcinoma. *BMC Cancer* 10: 512.
- Siiskonen, H., et al. 2011. Chronic UVR causes increased immunostaining of CD44 and accumulation of hyaluronan in mouse epidermis. *J. Histochem. Cytochem.* 59: 908-917.
- Siiskonen, H., et al. 2013. Inverse expression of hyaluronidase 2 and hyaluronan synthases 1-3 is associated with reduced hyaluronan content in malignant cutaneous melanoma. *BMC Cancer* 13: 181.
- de Sá, V.K., et al. 2013. Role of the extracellular matrix in variations of invasive pathways in lung cancers. *Braz. J. Med. Biol. Res.* 46: 21-31.

RESEARCH USE

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

PROTOCOLS

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