SANTA CRUZ BIOTECHNOLOGY, INC.

HAS2 (A-7): sc-514737

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 (A-7) is a mouse monoclonal antibody raised against amino acids 121-180 mapping within an internal region of HAS2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HAS2 (A-7) is available conjugated to agarose (sc-514737 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514737 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514737 PE), fluorescein (sc-514737 FITC), Alexa Fluor® 488 (sc-514737 AF488), Alexa Fluor® 546 (sc-514737 AF546), Alexa Fluor® 594 (sc-514737 AF594) or Alexa Fluor® 647 (sc-514737 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514737 AF680) or Alexa Fluor® 790 (sc-514737 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

HAS2 (A-7) 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 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 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.

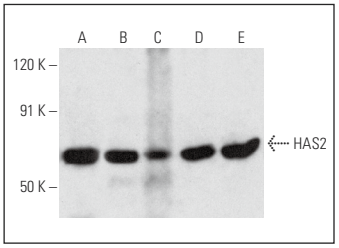
Molecular Weight of HAS2: 63 kDa.

Positive Controls: FHs 173We cell lysate: sc-2417, NTERA-2 cl.D1 whole cell lysate: sc-364181 or HeLa whole cell lysate: sc-2200.

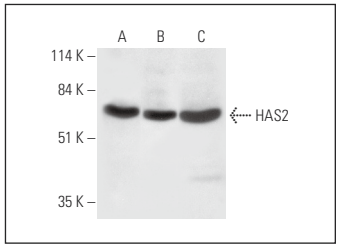
STORAGE

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

DATA



HAS2 (A-7): sc-514737. Western blot analysis of HAS2 expression in HL-60 (**A**), NIH/3T3 (**B**), C3H/10T1/2 (**C**), NRK (**D**) and RPE-J (**E**) whole cell lysates.



HAS2 (A-7): sc-514737. Western blot analysis of HAS2 expression in FHs 173We (**A**), NTERA-2 cl.D1 (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, F., et al. 2019. TGF-β1 promotes hyaluronan synthesis by upregulating hyaluronan synthase 2 expression in human granulosa-lutein cells. Cell. Signal. 63: 109392.
2. Chen, C.G., et al. 2020. Autophagic degradation of HAS2 in endothelial cells: a novel mechanism to regulate angiogenesis. Matrix Biol. 90: 1-19.
3. Yang, X., et al. 2021. The transcription factor C/EBPβ promotes HFL-1 cell migration, proliferation, and inflammation by activating lncRNA HAS2-AS1 in hypoxia. Front. Cell Dev. Biol. 9: 651913.
4. Lee, J.H., et al. 2022. Alzheimer's disease protease-containing plasma extracellular vesicles transfer to the hippocampus via the choroid plexus. EBioMedicine 77: 103903.
5. Chen, C.G., et al. 2023. Conditional expression of endorepellin in the tumor vasculature attenuates breast cancer growth, angiogenesis and hyaluronan deposition. Matrix Biol. 118: 92-109.
6. Solier, S., et al. 2023. A druggable copper-signalling pathway that drives inflammation. Nature 617: 386-394.
7. Wang, Z., et al. 2023. Moisturizing and antioxidant effects of *Artemisia argyi* essence liquid in HaCaT keratinocytes. Int. J. Mol. Sci. 24: 6809.
8. Mondal, D.K., et al. 2023. Decorin suppresses tumor lymphangiogenesis: a mechanism to curtail cancer progression. bioRxiv. E-published.
9. Fu, Z., et al. 2024. Hyaluronan and proteoglycan link protein 1—a novel signaling molecule for rejuvenating aged skin. Matrix Biol. 134: 30-47.
10. Xiao, P., et al. 2025. Targeting hyaluronan synthesis enhances the therapeutic effectiveness of biologics in inflammatory bowel disease. JCI Insight 10: e180425.

RESEARCH USE

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