

# CHSY2 (E-5): sc-376183

## BACKGROUND

Chondroitin sulfate synthases (CHSYs) synthesize chondroitin sulfate, a glycosaminoglycan expressed on the surface of most cells and in extracellular matrices. Glycosaminoglycan chains are covalently linked to various of core protein families and regulate many biologic processes, including extracellular matrix deposition, cell proliferation and recognition, and morphogenesis. The CHSY family includes CHSY1, CHSY2 and CHSY3. CHSY1 and CHSY3 display both glucuronyltransferase and N-acetylgalactosaminyltransferase activities, while CHSY2 is required for chondroitin polymerizing activity. CHSY2 localizes to the Golgi apparatus and is expressed ubiquitously, with highest expression observed in the pancreas, ovary, brain, heart, skeletal muscle, colon, kidney, liver, stomach, small intestine and placenta.

## REFERENCES

1. Nagase, T., et al. 1999. Prediction of the coding sequences of unidentified human genes. XIII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 6: 63-70.
2. Kitagawa, H., et al. 2001. Molecular cloning and expression of a human chondroitin synthase. J. Biol. Chem. 276: 38721-38726.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608183. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Kitagawa, H., et al. 2003. Molecular cloning of a chondroitin polymerizing factor that cooperates with chondroitin synthase for chondroitin polymerization. J. Biol. Chem. 278: 23666-23671.
5. Mizuguchi, S., et al. 2003. Chondroitin proteoglycans are involved in cell division of *Caenorhabditis elegans*. Nature 423: 443-448.
6. Yada, T., et al. 2003. Chondroitin sulfate synthase-3. Molecular cloning and characterization. J. Biol. Chem. 278: 39711-39725.

## CHROMOSOMAL LOCATION

Genetic locus: CHPF (human) mapping to 2q35; Chpf (mouse) mapping to 1 C4.

## SOURCE

CHSY2 (E-5) is a mouse monoclonal antibody raised against amino acids 31-100 mapping near the N-terminus of CHSY2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CHSY2 (E-5) is available conjugated to agarose (sc-376183 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376183 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376183 PE), fluorescein (sc-376183 FITC), Alexa Fluor® 488 (sc-376183 AF488), Alexa Fluor® 546 (sc-376183 AF546), Alexa Fluor® 594 (sc-376183 AF594) or Alexa Fluor® 647 (sc-376183 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376183 AF680) or Alexa Fluor® 790 (sc-376183 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

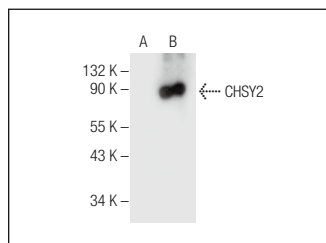
CHSY2 (E-5) is recommended for detection of CHSY2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CHSY2 siRNA (h): sc-60381, CHSY2 siRNA (m): sc-60382, CHSY2 shRNA Plasmid (h): sc-60381-SH, CHSY2 shRNA Plasmid (m): sc-60382-SH, CHSY2 shRNA (h) Lentiviral Particles: sc-60381-V and CHSY2 shRNA (m) Lentiviral Particles: sc-60382-V.

Molecular Weight of CHSY2: 85 kDa.

Positive Controls: CHSY2 (m): 293T Lysate: sc-119254.

## DATA



CHSY2 (E-5): sc-376183. Western blot analysis of CHSY2 expression in non-transfected: sc-117752 (A) and mouse CHSY2 transfected: sc-119254 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Liu, C.H., et al. 2021. CHPF regulates the aggressive phenotypes of hepatocellular carcinoma cells via the modulation of the decorin and TGF-β pathways. Cancers 13: 1261.
2. Liao, W.C., et al. 2021. CHPF promotes malignancy of breast cancer cells by modifying Syndecan-4 and the tumor microenvironment. Am. J. Cancer Res. 11: 812-826.
3. Guo, H., et al. 2023. Gua Lou Er Chen decoction attenuates atherosclerosis by reducing proteoglycans accumulation and inflammation. Phytomedicine 115: 154811.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.