SANTA CRUZ BIOTECHNOLOGY, INC.

# Chondroitinase (G-4): sc-390713


The Power to Question

## BACKGROUND

Chondroitinase, also known as GALNS (galactosamine (N-acetyl)-6-sulfate sulfatase), GAS or MPS4A, is a 522 amino acid protein that localizes to the lysosome and functions as an exohydrolase that is essential for the degradation of glycosaminoglycans, keratan sulfate and chondroitin 6-sulfate. Using calcium as a cofactor, Chondroitinase, which exists as a disulfide linked oligomer, catalyzes the hydrolysis of the 6-sulfate group on target substrates. Defects in the gene encoding Chondroitinase are the cause of mucopolysaccharidosis type 4A (MPS4A), an autosomal recessive lysosomal storage disease that is characterized by the intracellular accumulation of keratan sulfate and chondroitin-6-sulfate and is associated with dental anomalies, short stature and, in some cases, death in the second or third decade of life.

## REFERENCES

1. Bielicki, J., et al. 1991. Human liver N-acetylgalactosamine 6-sulphatase. Purification and characterization. Biochem. J. 279: 515-520.
2. Masue, M., et al. 1991. N-acetylgalactosamine-6-sulfate sulfatase in human placenta: purification and characteristics. J. Biochem. 110: 965-970.
3. Fukuda, S., et al. 1992. Mucopolysaccharidosis type IVA. N-acetylgalactosamine-6-sulfate sulfatase exonic point mutations in classical Morquio and mild cases. J. Clin. Invest. 90: 1049-1053.
4. Baker, E., et al. 1993. The morquio A syndrome (mucopolysaccharidosis IVA) gene maps to 16q24.3. Am. J. Hum. Genet. 52: 96-98.
5. Bielicki, J., et al. 1995. Expression, purification and characterization of recombinant human N-acetylgalactosamine-6-sulphatase. Biochem. J. 311: 333-339.

## CHROMOSOMAL LOCATION

Genetic locus: GALNS (human) mapping to 16q24.3; Galns (mouse) mapping to 8 E1.

## SOURCE

Chondroitinase (G-4) is a mouse monoclonal antibody raised against amino acids 401-522 mapping at the C-terminus of Chondroitinase 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.

Chondroitinase (G-4) is available conjugated to agarose (sc-390713 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390713 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390713 PE), fluorescein (sc-390713 FITC), Alexa Fluor® 488 (sc-390713 AF488), Alexa Fluor® 546 (sc-390713 AF546), Alexa Fluor® 594 (sc-390713 AF594) or Alexa Fluor® 647 (sc-390713 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390713 AF680) or Alexa Fluor® 790 (sc-390713 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## RESEARCH USE

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

## APPLICATIONS

Chondroitinase (G-4) is recommended for detection of Chondroitinase 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), 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 Chondroitinase siRNA (h): sc-72902, Chondroitinase siRNA (m): sc-72903, Chondroitinase shRNA Plasmid (h): sc-72902-SH, Chondroitinase shRNA Plasmid (m): sc-72903-SH, Chondroitinase shRNA (h) Lentiviral Particles: sc-72902-V and Chondroitinase shRNA (m) Lentiviral Particles: sc-72903-V.

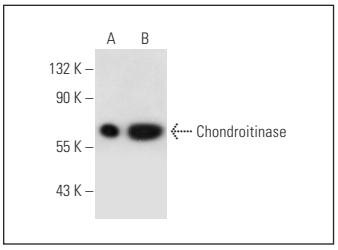
Molecular Weight of Chondroitinase: 58 kDa.

Positive Controls: JAR cell lysate: sc-2276 or MIA PaCa-2 cell lysate: sc-2285.

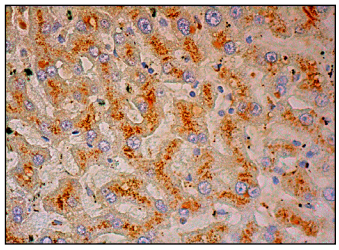
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




Chondroitinase (G-4): sc-390713. Western blot analysis of Chondroitinase expression in JAR (**A**) and MIA PaCa-2 (**B**) whole cell lysates.



Chondroitinase (G-4): sc-390713. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

## STORAGE

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