

# CSGlcA-T (N-15): sc-164124

## BACKGROUND

CSGlcA-T, also known as chondroitin polymerizing factor 2 (CHPF2), chondroitin sulfate glucuronyltransferase or chondroitin synthase-3 (CHSY3), is a 772 amino acid single-pass type II membrane protein of the Golgi apparatus that belongs to the chondroitin N-acetylgalactosaminyltransferase family. Widely expressed and existing as two alternatively spliced isoforms, CSGlcA-T is found at highest levels in small intestine, pancreas and placenta, with lower levels in heart, brain, kidney, and skeletal muscle where it transfers glucuronic acid from UDP-glucuronic acid to N-acetylgalactosamine residues of elongating chondroitin polymers. The gene encoding CSGlcA-T maps to human chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome and lissencephaly.

## REFERENCES

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3. Gotoh, M., et al. 2002. Molecular cloning and characterization of a novel chondroitin sulfate glucuronyltransferase that transfers glucuronic acid to N-acetylgalactosamine. *J. Biol. Chem.* 277: 38179-38188.
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. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608037. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. *Neuromolecular Med.* 8: 547-565.
7. Izumikawa, T., et al. 2007. Involvement of chondroitin sulfate synthase-3 (chondroitin synthase-2) in chondroitin polymerization through its interaction with chondroitin synthase-1 or chondroitin-polymerizing factor. *Biochem. J.* 403: 545-552.
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## CHROMOSOMAL LOCATION

Genetic locus: CHPF2 (human) mapping to 7q36.1; Chpf2 (mouse) mapping to 5 A3.

## SOURCE

CSGlcA-T (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CSGlcA-T of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-164124 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CSGlcA-T (N-15) is recommended for detection of CSGlcA-T of human origin, 2010209012Rik and the corresponding rat homolog by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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

Suitable for use as control antibody for CSGlcA-T siRNA (h): sc-89564, 2010209012Rik siRNA (m): sc-108603, CSGlcA-T shRNA Plasmid (h): sc-89564-SH, 2010209012Rik shRNA Plasmid (m): sc-108603-SH, CSGlcA-T shRNA (h) Lentiviral Particles: sc-89564-V and 2010209012Rik shRNA (m) Lentiviral Particles: sc-108603-V.

Molecular Weight of CSGlcA-T: 85 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## 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) or our catalog for detailed protocols and support products.