SANTA CRUZ BIOTECHNOLOGY, INC.

GlcAT-I (K-17): sc-240514

BACKGROUND

GlcAT-I (glucuronosyltransferase-I), also known as β-1,3-glucuronyltransferase 3 (B3GAT3), is a 335 amino acid single-pass type II membrane protein belonging to the glycosyltransferase 43 family. By using manganese as a cofactor, GlcAT-I catalyzes the formation of the glycosaminoglycan-protein linkage by way of a glucuronyl transfer reaction that is present in the final step of the biosynthesis of the linkage region of proteoglycans. Present as a disulfide-linked homodimer, GlcAT-I shows strict specificity for Gal-β-1,3-Gal-β-1,4-Xyl. Ubiquitously expressed, GlcAT-I is N-glycosylated and is localized to the Golgi apparatus membrane.

REFERENCES

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7. Gulberti, S., et al. 2005. Phosphorylation and sulfation of oligosaccharide substrates critically influence the activity of human β1,4-galactosyltransferase 7 (GalT-I) and β1,3-glucuronosyltransferase I (GlcAT-I) involved in the biosynthesis of the glycosaminoglycan-protein linkage region of proteoglycans. J. Biol. Chem. 280: 1417-1425.
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9. Tone, Y., et al. 2008. 2-o-phosphorylation of xylose and 6-o-sulfation of galactose in the protein linkage region of glycosaminoglycans influence the glucuronyltransferase-I activity involved in the linkage region synthesis. J. Biol. Chem. 283: 16801-16807.

CHROMOSOMAL LOCATION

Genetic locus: B3GAT3 (human) mapping to 11q12.3; B3gat3 (mouse) mapping to 19 A.

SOURCE

GlcAT-I (K-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GlcAT-I of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-240514 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GlcAT-I (K-17) is recommended for detection of GlcAT-I 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GlcAT-S.

GlcAT-I (K-17) is also recommended for detection of GlcAT-I in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GlcAT-I siRNA (h): sc-96989, GlcAT-I siRNA (m): sc-145416, GlcAT-I shRNA Plasmid (h): sc-96989-SH, GlcAT-I shRNA Plasmid (m): sc-145416-SH, GlcAT-I shRNA (h) Lentiviral Particles: sc-96989-V and GlcAT-I shRNA (m) Lentiviral Particles: sc-145416-V.

Molecular Weight of GlcAT-I: 37 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ 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 or our catalog for detailed protocols and support products.