SANTA CRUZ BIOTECHNOLOGY, INC.

XylT-II (G-1): sc-374134

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Xylosyltransferase-I (XylT-I), also designated UDP-D-xylose:proteoglycan core protein β-D-xylosyltransferase 1, is a glycoprotein that catalyzes the transfer of UDP-xylose to serine residues within XT recognition sequences of target proteins. Addition of xylose to the core protein is a requirement for the bio-synthesis of the glycosaminoglycan chains that are characteristic of proteoglycans. Xylosyltransferase proteins, which can be secreted, display activity in sternal cartilage chondrocytes, chondrosarcoma, nasal septum tumor and choriocarcinoma cells. XYIT-I is widely expressed, with higher levels of expression detected in placenta, kidney and pancreas, and lower levels of expression observed in skeletal muscle. Xylosyltransferase-II (XylT-II), also designated UDP-D-xylose:proteoglycan core protein β-D-xylosyltransferase 2, is also widely expressed, with higher levels of expression detected in kidney and pancreas.

REFERENCES

1. Götting, C., et al. 2004. Analysis of the DXD motifs in human xylosyltransferase I required for enzyme activity. J. Biol. Chem. 279: 42566-42573.
2. Schön, S., et al. 2005. Impact of polymorphisms in the genes encoding xylosyltransferase I and a homologue in type 1 diabetic patients with and without nephropathy. Kidney Int. 68: 1483-1490.
3. Götting, C., et al. 2005. Elevated xylosyltransferase I activities in pseudoxanthoma elasticum (PXE) patients as a marker of stimulated proteoglycan biosynthesis. J. Mol. Med. 83: 984-992.

CHROMOSOMAL LOCATION

Genetic locus: XYLT2 (human) mapping to 17q21.33; Xylt2 (mouse) mapping to 11 D.

SOURCE

XylT-II (G-1) is a mouse monoclonal antibody raised against amino acids 31-110 mapping near the N-terminus of XylT-II 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.

XylT-II (G-1) is available conjugated to agarose (sc-374134 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374134 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374134 PE), fluorescein (sc-374134 FITC), Alexa Fluor® 488 (sc-374134 AF488), Alexa Fluor® 546 (sc-374134 AF546), Alexa Fluor® 594 (sc-374134 AF594) or Alexa Fluor® 647 (sc-374134 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374134 AF680) or Alexa Fluor® 790 (sc-374134 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

XylT-II (G-1) is recommended for detection of XylT-II 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 XylT-II siRNA (h): sc-61819, XylT-II siRNA (m): sc-61820, XylT-II shRNA Plasmid (h): sc-61819-SH, XylT-II shRNA Plasmid (m): sc-61820-SH, XylT-II shRNA (h) Lentiviral Particles: sc-61819-V and XylT-II shRNA (m) Lentiviral Particles: sc-61820-V.

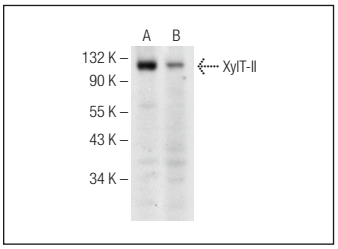
Molecular Weight of XylT-II: 97 kDa.

Positive Controls: JAR cell lysate: sc-2276, Caki-1 cell lysate: sc-2224 or MIA PaCa-2 cell lysate: sc-2285.

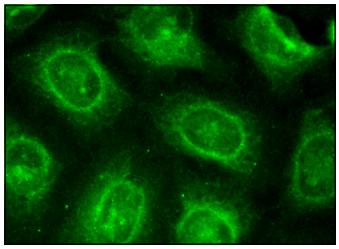
RECOMMENDED SUPPORT REAGENTS

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.

DATA



XylT-II (G-1): sc-374134. Western blot analysis of XylT-II expression in MIA PaCa-2 (**A**) and Caki-1 (**B**) whole cell lysates.



XylT-II (G-1): sc-374134. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Kuhn, P.H., et al. 2015. Secretome analysis identifies novel signal peptide peptidase-like 3 (Sppl3) substrates and reveals a role of Sppl3 in multiple Golgi glycosylation pathways. Mol. Cell. Proteomics 14: 1584-1598.
2. Suzuki, T., et al. 2022. Genome-wide CRISPR screen for HSV-1 host factors reveals PAPSS1 contributes to heparan sulfate synthesis. Commun. Biol. 5: 694.

RESEARCH USE

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