SANTA CRUZ BIOTECHNOLOGY, INC.

Glucosidase IIβ (D-1): sc-46685

BACKGROUND

Trimming of glucoses from N-linked core glycans on newly synthesized glycoproteins occurs sequentially through the action of Glucosidases I and II in the endoplasmic reticulum (ER). Glucosidase II is an ER-localized enzyme that contains α and β subunits (Glucosidase IIα and Glucosidase IIβ). The α and β subunits form a defined heterodimeric complex. Glucosidase IIα is the catalyitc core of the enzyme and can function independently of the β subunit. The sequence of Glucosidase IIβ encodes protein rich in glutamic and aspartic acid with a putative ER retention signal (HDEL) at the C terminus. The phosphorylated form of Glucosidase IIβ is localized in the plasma membrane and is highly expressed in FGF stimulated fibroblasts and epidermal carcinoma cells. Glucosidase IIβ was first purified from a human carcinoma cell line as a potential substrate for protein kinase C. Through the HDEL signal at the C-terminus, Glucosidase IIβ retains the complete complex in the ER.

REFERENCES

1. Shailubhai, K., et al. 1987. Purification and characterization of Glucosidase I involved in N-linked glycoprotein processing in bovine mammary gland. Biochem. J. 247: 555-562.
2. Saxena, S., et al. 1987. Purification and characterization of Glucosidase II involved in N-linked glycoprotein processing in bovine mammary gland. Biochem. J. 247: 563-570.

CHROMOSOMAL LOCATION

Genetic locus: PRKCSH (human) mapping to 19p13.2.

SOURCE

Glucosidase IIβ (D-1) is a mouse monoclonal antibody raised against amino acids 333-527 of Glucosidase IIβ of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Glucosidase IIβ (D-1) is recommended for detection of the β subunit of Glucosidase II of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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 Glucosidase IIβ siRNA (h): sc-29598, Glucosidase IIβ shRNA Plasmid (h): sc-29598-SH and Glucosidase IIβ shRNA (h) Lentiviral Particles: sc-29598-V.

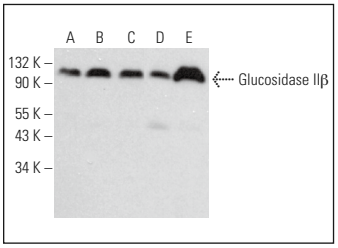
Molecular Weight of Glucosidase IIβ: 80-90 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HEL 92.1.7 cell lysate: sc-2270 or SK-MEL-24 whole cell lysate: sc-364259.

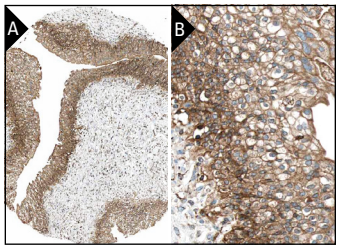
RECOMMENDED SUPPORT REAGENTS

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



Glucosidase IIβ (D-1): sc-46685. Western blot analysis of Glucosidase IIβ expression in K-562 (**A**), HEL 92.1.7 (**B**), A2058 (**C**), SK-BR-3 (**D**) and SK-MEL-24 (**E**) whole cell lysates.



Glucosidase IIβ (D-1): sc-46685. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of surface epithelial cells at low (**A**) and high (**B**) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Jochim, N., et al. 2011. Impact of clostridial glucosylating toxins on the proteome of colonic cells determined by isotope-coded protein labeling and LC-MALDI. Proteome Sci. 9: 48.
2. Shin, G.C., et al. 2019. PRKCSH contributes to tumorigenesis by selective boosting of IRE1 signaling pathway. Nat. Commun. 10: 3185.
3. Shin, G.C., et al. 2024. PRKCSH contributes to TNFSF resistance by extending IGF1R half-life and activation in lung cancer. Exp. Mol. Med. 56: 192-209.

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 for detailed protocols and support products.