SANTA CRUZ BIOTECHNOLOGY, INC.

Glucosidase IIβ (m): 293T Lysate: sc-120511

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) which 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., Pratta M.A. and Vijay, I.K. 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., Shailubhai, K., Dong-Yu, B. and Vijay, I.K. 1987. Purification and characterization of Glucosidase II involved in N-linked glycoprotein processing in bovine mammary gland. Biochem. J. 247: 563-570.
3. Trombetta, E.S., Simons, J.F. and Helenius, A. 1996. Endoplasmic reticulum Glucosidase II is composed of a catalytic subunit, conserved from yeast to mammals, and a tightly bound noncatalytic HDEL-containing subunit. J. Biol. Chem. 271: 27509-27516.
4. Treml, K., Meimaroglou, D., Hentges, A. and Bause, E. 2000. The α- and β-subunits are required for expression of catalytic activity in the hetero-dimeric Glucosidase II complex from human liver. Glycobiology 10: 493-502.
5. Trombetta, E.S., Fleming, K.G. and Helenius, A. 2001. Quaternary and domain structure of glycoprotein processing Glucosidase II. Biochemistry 40: 10717-10722.

CHROMOSOMAL LOCATION

Genetic locus: Prkcsh (mouse) mapping to 9 A3.

PRODUCT

Glucosidase IIβ (m): 293T Lysate represents a lysate of mouse Glucosidase IIβ transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

Glucosidase IIβ (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Glucosidase IIβ antibodies. Recommended use: 10-20 µl per lane.

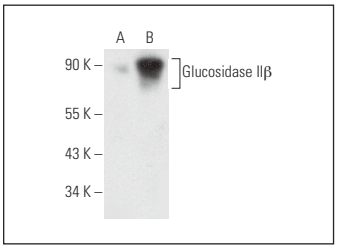
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Glucosidase IIβ (A-7): sc-514870 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Glucosidase IIβ expression in Glucosidase IIβ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



Glucosidase IIβ (A-7): sc-514870. Western blot analysis of Glucosidase IIβ expression in non-transfected: sc-117752 (**A**) and mouse Glucosidase IIβ transfected: sc-120511 (**B**) 293T whole cell lysates.

RESEARCH USE

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