

# Glucosidase II $\beta$ (N-19): sc-6452

## 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  $\alpha$  and  $\beta$  subunits (Glucosidase II $\alpha$  and Glucosidase II $\beta$ ) which form a defined heterodimeric complex. Glucosidase II $\alpha$  is the catalytic core of the enzyme and can function independently of the  $\beta$  subunit. The sequence of Glucosidase II $\beta$  encodes protein rich in glutamic and aspartic acid with a putative ER retention signal (HDEL) at the C-terminus. The phosphorylated form of Glucosidase II $\beta$  is localized in the plasma membrane and is highly expressed in FGF-stimulated fibroblasts and epidermal carcinoma cells. Glucosidase II $\beta$  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 II $\beta$  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.
3. Trombetta, E.S., et al. 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. Tremblay, K., et al. 2000. The  $\alpha$ - and  $\beta$ -subunits are required for expression of catalytic activity in the hetero-dimeric Glucosidase II complex from human liver. *Glycobiology* 10: 493-502.

## CHROMOSOMAL LOCATION

Genetic locus: PRKCSH (human) mapping to 19p13.2; Prkcsb (mouse) mapping to 9 A3.

## SOURCE

Glucosidase II $\beta$  (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Glucosidase II $\beta$  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-6452 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Glucosidase II $\beta$  (N-19) is recommended for detection of the  $\beta$  subunit of Glucosidase II of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

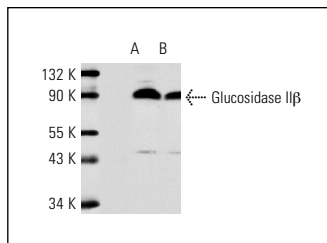
Glucosidase II $\beta$  (N-19) is also recommended for detection of the  $\beta$  subunit of Glucosidase II in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Glucosidase II $\beta$  siRNA (h): sc-29598 and Glucosidase II $\beta$  siRNA (m): sc-29599., Glucosidase II $\beta$  shRNA Plasmid (h): sc-29598-SH, Glucosidase II $\beta$  shRNA Plasmid (m): sc-29599-SH, Glucosidase II $\beta$  shRNA (h) Lentiviral Particles: sc-29598-V and Glucosidase II $\beta$  shRNA (m) Lentiviral Particles: sc-29599-V.

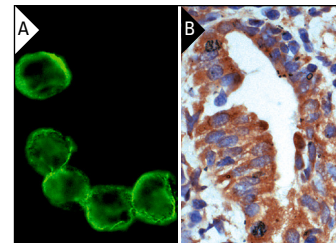
Molecular Weight of Glucosidase II $\beta$ : 80-90 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

## DATA



Glucosidase II $\beta$  (N-19): sc-6452. Western blot analysis of Glucosidase II $\beta$  expression in K-562 (A) and Jurkat (B) whole cell lysates.



Glucosidase II $\beta$  (N-19): sc-6452. Immunofluorescence staining of methanol-fixed K-562 cells showing membrane staining (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human lung tumor showing cytoplasmic staining (B).

## 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.

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Try **Glucosidase II $\beta$  (H-4): sc-374457** or **Glucosidase II $\beta$  (D-1): sc-46685**, our highly recommended monoclonal alternatives to Glucosidase II $\beta$  (N-19).