

Glucosidase II β (L-17): sc-20283

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 II α and Glucosidase II β). The α and β subunits form a defined heterodimeric complex with a molecular weight about 161 kDa. Glucosidase II α is the catalytic core of the enzyme and can function independently of the β subunit. The sequence of Glucosidase II β 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 β is localized in the plasma membrane and is highly expressed in FGF stimulated fibroblasts and epidermal carcinoma cells. Glucosidase II β 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 β retains the complete complex in the ER.

REFERENCES

- 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.
- 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.
- 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.
- Arendt, C.W., et al. 1997. Identification of the CD45-associated 116 kDa and 80 kDa proteins as the α and β subunits of α -Glucosidase II. *J. Biol. Chem.* 272: 13117-13125.
- Tremli, K., et al. 2000. The α and β subunits are required for expression of catalytic activity in the heterodimeric Glucosidase II complex from human liver. *Glycobiology* 10: 493-502.

CHROMOSOMAL LOCATION

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

SOURCE

Glucosidase II β (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Glucosidase II β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-20283 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Glucosidase II β (L-17) is recommended for detection of the β 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 μ g per 100-500 μ g 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).

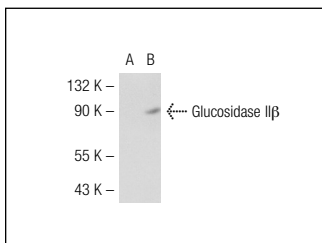
Glucosidase II β (L-17) is also recommended for detection of the β subunit of Glucosidase II in additional species, including equine, canine, bovine and porcine.

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

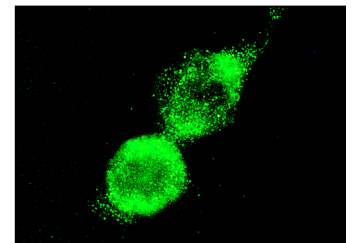
Molecular Weight of Glucosidase II β : 80-90 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, U-87 MG cell lysate: sc-2411 or Glucosidase II β (m): 293T Lysate: sc-120511.

DATA



Glucosidase II β (L-17): sc-20283. Western blot analysis of Glucosidase II β expression in non-transfected: sc-117752 (A) and mouse Glucosidase II β transfected: sc-120511 (B) 293T whole cell lysates.



Glucosidase II β (L-17): sc-20283. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic localization.

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.



Try **Glucosidase II β (H-4): sc-374457** or **Glucosidase II β (D-1): sc-46685**, our highly recommended monoclonal alternatives to Glucosidase II β (L-17).