

β -glucosidase (H-300): sc-32883

BACKGROUND

β -glucosidase is a predominantly liver enzyme which efficiently hydrolyzes β -D-glucoside and β -D-galactoside. Defects in β -glucosidase cause Gaucher disease, an inherited condition distinguished by the accumulation of glucosylceramide within the cells of the reticuloendothelial system. β -glucosidase is used in enzyme replacement treatment aimed at treating Gaucher disease. The absorption of dietary flavonoid glycosides in humans involves a critical deglycosylation step that is mediated by epithelial β -glucosidases.

REFERENCES

- Overkleeft, H.S., et al. 1998. Generation of specific deoxynojirimycin-type inhibitors of the non-lysosomal glucosylceramidase. *J. Biol. Chem.* 273: 26522-26527.
- de Graaf, M., et al. 2001. Cloning and characterization of human liver cytosolic β -glucosidase. *Biochem. J.* 356: 907-910.
- Nemeth K., et al. 2003. Deglycosylation by small intestinal epithelial cell β -glucosidases is a critical step in the absorption and metabolism of dietary flavonoid glycosides in humans. *Eur. J. Nutr.* 42: 29-42.

CHROMOSOMAL LOCATION

Genetic locus: GBA (human) mapping to 1q22; Gba (mouse) mapping to 3 F1.

SOURCE

β -glucosidase (H-300) is a rabbit polyclonal antibody raised against amino acids 237-536 mapping at the C-terminus of β -glucosidase 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.

APPLICATIONS

β -glucosidase (H-300) is recommended for detection of β -glucosidase 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), 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).

β -glucosidase (H-300) is also recommended for detection of β -glucosidase in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for β -glucosidase siRNA (h): sc-44904, β -glucosidase siRNA (m): sc-44905, β -glucosidase shRNA Plasmid (h): sc-44904-SH, β -glucosidase shRNA Plasmid (m): sc-44905-SH, β -glucosidase shRNA (h) Lentiviral Particles: sc-44904-V and β -glucosidase shRNA (m) Lentiviral Particles: sc-44905-V.

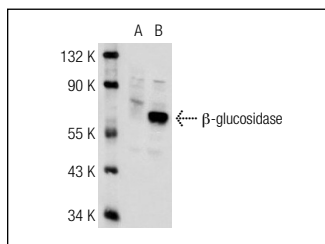
Molecular Weight of β -glucosidase: 57 kDa.

Positive Controls: β -glucosidase (h): 293T Lysate: sc-110483, MCF7 whole cell lysate: sc-2206 or mouse liver extract: sc-2256.

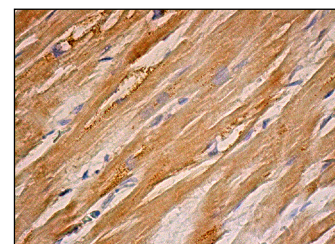
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz[™]: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



β -glucosidase (H-300): sc-32883. Western blot analysis of β -glucosidase expression in non-transfected: sc-117752 (A) and human β -glucosidase transfected: sc-110483 (B) 293T whole cell lysates.



β -glucosidase (H-300): sc-32883. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic staining of myocytes.

SELECT PRODUCT CITATIONS

- Otomo, T., et al. 2011. Lysosomal storage causes cellular dysfunction in mucopolipidosis II skin fibroblasts. *J. Biol. Chem.* 286: 35283-35290.

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 β -glucosidase (B-6): sc-166407 or β -glucosidase (C-2): sc-365745, our highly recommended monoclonal alternatives to β -glucosidase (H-300).