

# β-glucosidase (h): 293T Lysate: sc-110483

## 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., Renkema, G.H., Neele, J., Vianello, P., Hung, I.O., Strijland, A., van der Burg, A.M., Koomen, G.J., Pandit, U.K. and Aerts, J.M. 1998. Generation of specific deoxynojirimycin-type inhibitors of the non-lysosomal glucosylceramidase. *J. Biol. Chem.* 273: 26522-26527.
- de Graaf, M., van Veen, I.C., van der Meulen-Muileman, I.H., Gerritsen, W.R., Pinedo, H.M. and Haisma, H.J. 2001. Cloning and characterization of human liver cyto-solic β-glucosidase. *Biochem. J.* 356: 907-910.
- Nemeth, K., Plumb, G.W., Berrin, J.G., Juge, N., Jacob, R., Naim, H.Y., Williamson, G., Swallow, D.M. and Kroon, P.A. 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.
- Zhao, L., Beyer, N.J., Borisova, S.A. and Liu, H.W. 2003. β-glucosylation as a part of self-resistance mechanism in methymycin/pikromycin producing strain *Streptomyces venezuelae*. *Biochemistry* 42: 14794-14804.
- Salvioli, R., Scarpa, S., Ciaffoni, F., Tatti, M., Ramoni, C., Vanier, M.T. and Vaccaro, A.M. 2004. Glucosylceramidase mass and subcellular localization are modulated by cholesterol in Niemann-Pick disease type C. *J. Biol. Chem.* 279: 17674-17680.
- Paal, K., Ito, M. and Withers, S.G. 2004. *Paenibacillus* sp. TS12 glucosylceramidase: kinetic studies of a novel sub-family of family 3 glycosidases and identification of the catalytic residues. *Biochem. J.* 378: 141-149.

## CHROMOSOMAL LOCATION

Genetic locus: GBA (human) mapping to 1q22.

## PRODUCT

β-glucosidase (h): 293T Lysate represents a lysate of human β-glucosidase 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](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

β-glucosidase (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive β-glucosidase antibodies.

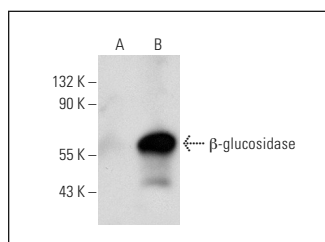
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

β-glucosidase (B-6): sc-166407 is recommended as a positive control antibody for Western Blot analysis of enhanced human β-glucosidase expression in β-glucosidase transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

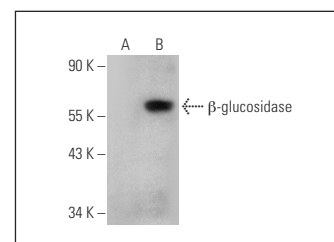
## RECOMMENDED SUPPORT REAGENTS

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



β-glucosidase (B-6): sc-166407. 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 (C-2): sc-365745. 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.

## RESEARCH USE

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