

# β-glucosidase (A-16): sc-100544

## 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 cytosolic β-glucosidase. *Biochem. J.* 356: 907-910.
- 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

β-glucosidase (A-16) is a mouse monoclonal antibody raised against recombinant β-glucosidase of human origin.

## PRODUCT

Each vial contains 100 μg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

β-glucosidase (A-16) is recommended for detection of β-glucosidase of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg 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).

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

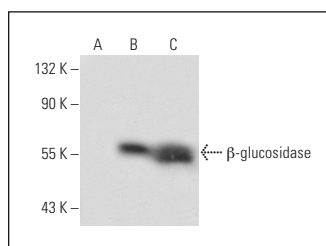
Molecular Weight of β-glucosidase: 57 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

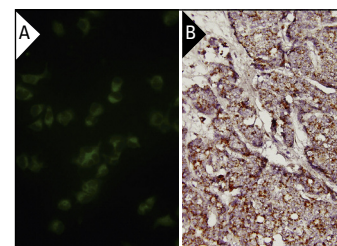
## RECOMMENDED SUPPORT REAGENTS

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, 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



β-glucosidase (A-16): sc-100544. Western blot analysis of β-glucosidase expression in non-transfected 293T: sc-117752 (A), human β-glucosidase transfected 293T: sc-110483 (B) and MCF7 (C) whole cell lysates.



β-glucosidase (A-16): sc-100544. Immunofluorescence staining of paraformaldehyde-fixed HeLa cells (A) and immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast cancer tissue (B) showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Sharma, R., Anguela, X.M., Doyon, Y., Wechsler, T., DeKelder, R.C., Sproul, S., Paschon, D.E., Miller, J.C., Davidson, R.J., Shivak, D., Zhou, S., Rieders, J., Gregory, P.D., Holmes, M.C., Rebar, E.J. and High, K.A. 2015. *In vivo* genome editing of the albumin locus as a platform for protein replacement therapy. *Blood* 126: 1777-1784.

## 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) for detailed protocols and support products.