SANTA CRUZ BIOTECHNOLOGY, INC.

β-glucosidase (L-17): sc-30845

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

1. Overkleeft, H.S., et al. 1998. Generation of specific deoxynojirimycin-type inhibitors of the non-lysosomal glucosylceramidase. J. Biol. Chem. 273: 26522-26527.
2. de Graaf, M., et al. 2001. Cloning and characterization of human liver cytosolic β-glycosidase. Biochem. J. 356: 907-910.
3. 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.
4. Zhao, L., et al. 2003. β-glucosylation as a part of self-resistance mechanism in methymycin/pikromycin producing strain *Streptomyces venezuelae*. Biochemistry 42: 14794-14804.
5. Salvioli, R., et al. 2004. Glucosylceramidase mass and subcellular localization are modulated by cholesterol in Niemann-Pick disease type C. J. Biol. Chem. 279: 17674-17680.
6. Paal, K., et al. 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; Gba (mouse) mapping to 3 F1.

SOURCE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-30845 P, (100 µg 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.

RESEARCH USE

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

APPLICATIONS

β-glucosidase (L-17) 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), 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).

β-glucosidase (L-17) is also recommended for detection of β-glucosidase in additional species, including equine, 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 shRNAPlasmid (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: MCF7 whole cell lysate: sc-2206, mouse liver extract: sc-2256 or rat liver extract: sc-2395.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.