SANTA CRUZ BIOTECHNOLOGY, INC.

β-glucuronidase (C-16): sc-26283

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The enzyme β-glucuronidase catalyzes the conversion of β-D-glucuronoside and water to an alcohol and D-glucuronate. Deficiency of β-glucuronidase is the cause of the human lysosomal storage disorder mucopolysaccharidosis type VII (MPS VII). Specifically, two residues appear important for catalytic activity: Glu 451 and Glu 540. Mutations at these sites affect the overall structure of the protein, which normally consists of a homotetramer with each promoter including a jelly roll barrel, an immunoglobulin constant domain and a TIM barrel. Regulation of β-glucuronidase activity may play a role in tumorigenesis and the invasiveness of a number of cancers, and is also an important factor in the development of functional prodrugs that require the cleavage of an active cytostatic by endogenous enzymes for antitumor activity.

REFERENCES

1. Jain, S., et al. 1996. Structure of human β-glucuronidase reveals candidate lysosomal targeting and active-site motifs. Nat. Struct. Biol. 3: 375-381.
2. Vervoort, R., et al. 1998. Low β-glucuronidase enzyme activity and mutations in the human β-glucuronidase gene in mild mucopolysaccharidosis type VII, pseudodeficiency and a heterozygote. Hum. Genet. 102: 69-78.

CHROMOSOMAL LOCATION

Genetic locus: GUSB (human) mapping to 7q21.11.

SOURCE

β-glucuronidase (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of β-glucuronidase 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-26283 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β-glucuronidase (C-16) is recommended for detection of β-glucuronidase 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β-glucuronidase siRNA (h): sc-44458, β-glucuronidase shRNA Plasmid (h): sc-44458-SH and β-glucuronidase shRNA (h) Lentiviral Particles: sc-44458-V.

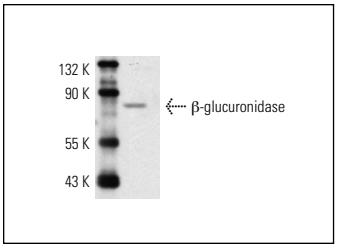
Molecular Weight of β-glucuronidase: 82 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209 or Hep G2 cell lysate: sc-2227.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



β-glucuronidase (C-16): sc-26283. Western blot analysis of β-glucuronidase expression in HL-60 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Sanchez, A.M., et al. 2010. Estrogen receptor-α promotes breast cancer cell motility and invasion via focal adhesion kinase and N-WASP. Mol. Endocrinol. 24: 2114-2125.

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.