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PRODUCT INFORMATION



GBA3 (human, recombinant)

Item No. 33991

Overview and Properties

Synonyms: cBGL1, Cytosolic β-Glucosidase, Cytosolic β-Glucosidase-like Protein-1, Klotho-related

Source: Active recombinant human C-terminal His-tagged GBA3 expressed in insect cells

Amino Acids: 1-469 (full length)

Q9H227 Uniprot No.: Molecular Weight: 55 kDa

-80°C (as supplied) Storage:

Stability: ≥1 year

Purity: ≥90% estimated by SDS-PAGE

Supplied in: Lyophilized from sterile 20 mM Tris, pH 7.4, with 500 mM sodium chloride, and 10% glycerol

Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay

Protein

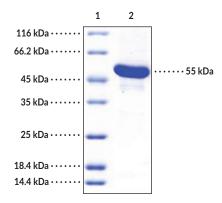
Concentration: batch specific mg/ml

Activity: Measured by its ability to hydrolyze 4-methylumbelliferyl-β-D glucopyranoside.

Specific Activity: batch specific U/mg

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers Lane 2: GBA3

SDS-PAGE Analysis of GBA3. This protein has a calculated molecular weight of 55 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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PRODUCT INFORMATION



Description

Cytosolic β-glucosidase (GBA3) is a neutral β-glucocerebrosidase.^{1,2} It is composed of a single glycoside hydrolase domain and hydrolyzes glucosyl- and galactosylceramides. GBA3 is expressed in the liver, small intestine, colon, spleen, and kidneys.³ *In vitro*, knockdown of GBA3 inhibits mitotic arrest and promotes resistance to paclitaxel (Item No. 10461) in colon cancer cells.⁴ Tumor levels of GBA3 are lower in patients with hepatocellular carcinoma and decreased expression is associated with poor prognosis.⁵ Unlike *GBA1*, polymorphisms in *GBA3* are not associated with Gaucher disease, a lysosomal storage disorder.⁶ Cayman's GBA3 (human, recombinant) protein can be used for enzyme activity assays. This protein consists of 480 amino acids and has a calculated molecular weight of 55 kDa.

References

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- 4. Swanton, C., Marani, M., Pardo, O., et al. Regulators of mitotic arrest and ceramide metabolism are determinants of sensitivity to paclitaxel and other chemotherapeutic drugs. Cancer Cell 11(6), 498-512 (2007).
- 5. Ying, J.F., Zhang, Y.N., Song, S.S., et al. Decreased expression of GBA3 correlates with a poor prognosis in hepatocellular carcinoma patients. *Neoplasma* **67(5)**, 1139-1145 (2020).
- 6. Beutler, E., Beutler, L., and West, C. Mutations in the gene encoding cytosolic β-glucosidase in Gaucher disease. *J. Lab. Clin. Med.* **144(2)**, 65-68 (2004).

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