

DESCRIPTION

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|---------------------------|---|
| Species Reactivity | Human |
| Specificity | Detects human Cytosolic β -Glucosidase/GBA3 in direct ELISAs. |
| Source | Monoclonal Mouse IgG _{2B} Clone # 728702 |
| Purification | Protein A or G purified from hybridoma culture supernatant |
| Immunogen | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human Cytosolic β -Glucosidase/GBA3 Thr13-Leu469 Accession # Q9H227 |
| Formulation | Lyophilized from a 0.2 μ m filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μ m filtered solution in PBS. |

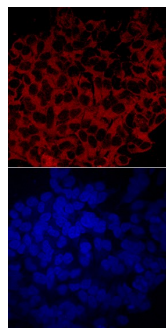
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the [Technical Information](#) section on our website.

| | Recommended Concentration | Sample |
|----------------------------|---------------------------|-----------|
| Immunocytochemistry | 8-25 μ g/mL | See Below |

DATA

Immunocytochemistry



Cytosolic β -Glucosidase/GBA3 in HeLa Human Cell Line.
Cytosolic β -Glucosidase/GBA3 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Mouse Anti-Human Cytosolic β -Glucosidase/GBA3 Monoclonal Antibody (Catalog # MAB59691) at 10 μ g/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red, upper panel; Catalog # NL007) and counterstained with DAPI (blue, lower panel). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.5 mg/mL. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

There are three beta-glucosidases (GBA) in human genome. GBA1 encodes a lysosomal membrane protein that cleaves the beta-glucosidic linkage of glucosylceramide (1). GBA2 encodes a microsomal beta-glucosidase that catalyzes the hydrolysis of bile acid 3-O-glucosides (2). GBA3 is a cytosolic beta-glucosidase and is predominantly expressed in liver. GBA3 efficiently hydrolyzes beta-D-glucoside and beta-D-galactoside, but not any known physiological beta-glucoside, suggesting that it may be involved in detoxification of plant glycosides (3). GBA3 also has significant neutral glycosylceramidase activity, suggesting that it may be involved in a nonlysosomal catabolic pathway of glucosylceramide metabolism (4). At the protein level, GBA3 shows significant homology (>40%) with Klotho protein that is known for its association with aging process (3, 4).

References:

1. Tybulewicz, V.L. *et al.* (1992) *Nature* **357**:407.
2. Matern, H. *et al.* (2001) *J. Biol. Chem.* **276**:37929.
3. de Graaf, M. *et al.* (2001) *Biochem. J.* **356**:907.
4. Hayashi, Y. *et al.* (2007) *J. Biol. Chem.* **282**:30889.