

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human β -Glucuronidase/GUSB in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human β -Glucuronidase/GUSB Met1-Thr651 Accession # AAA52561
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 either lyophilized or as a 0.2 μ m filtered solution in PBS.

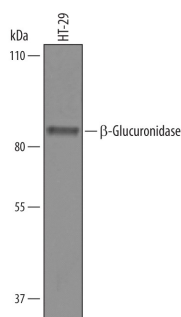
APPLICATIONS

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
Western Blot	1 μ g/mL	See Below
Simple Western	10 μ g/mL	See Below

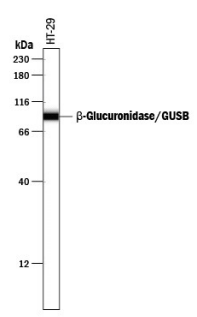
DATA

Western Blot




Detection of Human β -Glucuronidase/GUSB by Western Blot. Western blot shows lysates of HT-29 human colon adenocarcinoma cell line. PVDF Membrane was probed with 1 μ g/mL of Human β -Glucuronidase/GUSB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6144) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for β -Glucuronidase/GUSB at approximately 82 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

Simple Western



Detection of Human β -Glucuronidase/GUSB by Simple Western™. Simple Western lane view shows lysates of HT-29 human colon adenocarcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for β -Glucuronidase/GUSB at approximately 92 kDa (as indicated) using 10 μ g/mL of Sheep Anti-Human β -Glucuronidase/GUSB Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6144) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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

Human β -Glucuronidase (EC 3.2.1.31) encoded by the GUSB gene is a lysosomal hydrolase involved in the stepwise degradation of glucuronic acid-containing glycosaminoglycans that include heparan sulfate, chondroitin sulfate and hyaluronan (1). The enzyme is only active on the glucuronic acid of the non-reducing end. The native protein has been reported as a tetrameric glycoprotein composed of identical subunits (1, 2). Mutations in the GUSB gene are linked to mucopolysaccharidosis type VII (3). Accumulation of partially degraded glycosaminoglycans, with glucuronic acid residues at the non-reducing termini, are usually found in the lysosomes of patients with the disease (3). It has also been reported that this enzyme may contribute to the depletion of chondroitin from cartilage and thereby facilitate the damage of joints in rheumatoid arthritis (4).

References:

1. Shipley, J.M. *et al.* (1993) Am. J. Hum. Genet. **52**:517.
2. Oshima, A, *et al.* (1987) Proc. Natl. Acad. Sci. USA **84**:685.
3. Bell, C.E. Jr. *et al.* (1977) J. Clin. Invest. **59**:97.
4. Ortutay, Z. *et al.* (2003) Arthritis Rheum. **48**:2163.