Human/Mouse Sulfamidase/SGSH Antibody

Monoclonal Mouse IgG_{2A} Clone # 1018331

Catalog Number: MAB83801

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human Sulfamidase/SGSH in direct ELISAs. Detects human and mouse Sulfamidase/SGSH in Western blots.
Source	Monoclonal Mouse IgG_{2A} Clone # 1018331
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*Spodoptera frugiperda*, *Sf 21* (baculovirus)-derived human Sulfamidase/SGSH Arg23-Leu502 Accession # P51688
Formulation	Lyophilized from a 0.2 μm 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 μm filtered solution in PBS.

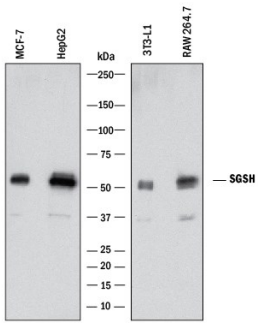
APPLICATIONS

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	2 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below
Simple Western	20 µg/mL	See Below

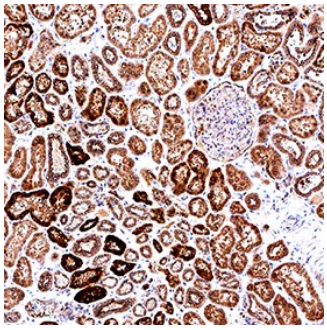
DATA

Western Blot



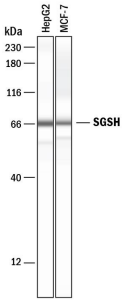
Detection of Human and Mouse Sulfamidase/SGSH by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line, HepG2 human hepatocellular carcinoma cell line, 3T3-L1 mouse embryonic fibroblast adipose-like cell line, and RAW 264.7 mouse monocyte/macrophage cell line. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human/Mouse Sulfamidase/SGSH Monoclonal Antibody (Catalog # MAB83801) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # Catalog # HAF018). A specific band was detected for Sulfamidase/SGSH at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Sulfamidase/SGSH in Human Kidney. Sulfamidase/SGSH was detected in immersion fixed paraffin-embedded sections of human kidney using Mouse Anti-Human/Mouse Sulfamidase/SGSH Monoclonal Antibody (Catalog # MAB83801) at 5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to convoluted tubules and glomeruli. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

Simple Western



Detection of Human Sulfamidase/SGSH by Simple Western™. Simple Western lane view shows lysates of HepG2 human hepatocellular carcinoma cell line and MCF-7 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for Sulfamidase/SGSH at approximately 70 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human/Mouse Sulfamidase/SGSH Monoclonal Antibody (Catalog # MAB83801) . This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

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Human/Mouse Sulfamidase/SGSH Antibody

Monoclonal Mouse IgG_{2A} Clone # 1018331

Catalog Number: MAB83801

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
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.** • 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

Also known as N-sulfoglucosamine sulfohydrolase and heparan N-sulfatase, Sulfamidase/SGSH is an important member of the sulfatase family involved in the degradation of heparan sulfate (HS) (1). Different from the HS specific endosulfatases that remove sulfate from internal GlcNAc residues (2), SGSH removes sulfate group from the non-reducing end glucosamine residues on HS. The SGSH deficiency results in mucopolysaccharidosis type IIIA (MPS IIIA, Sanfilippo A syndrome), an autosomal recessive lysosomal storage disease characterized by neurological dysfunction but relatively mild somatic manifestations (3). Human SGSH shows 88.6% sequence identity with that of mouse sequence.

References:

1. DiezRoux, G. and Ballabio, A. *et al.* (2005) Annu. Rev. Genomics Hum. Genet. **6**:355.
2. Morimoto-Tomita, M. *et al.* (2002) J. Biol. Chem. **277**:49175.
3. Blanch, L. *et al.* (1997) Hum. Mol. Genet. **6**:787.

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