Human Cytosolic Sulfotransferase 1A1/SULT1A1 Antibody

Monoclonal Mouse IgG_1 Clone # 638708

Catalog Number: MAB5546

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Cytosolic Sulfotransferase 1A1/SULT1A1 in direct ELISAs and Western blots. In direct ELISAs, 100% cross-reactivity with recombinant human (rh) SULT1A3 and rhSULT1C4 and approximately 10% cross-reactivity with rhSULT1B1 is observed. No cross-reactivity with rhSULT1E1, 2A1, 2B1, or 4A1 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 638708
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human Cytosolic Sulfotransferase 1A1/SULT1A1 Glu2-Leu295 Accession # P50225
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 as a 0.2 μm filtered solution in PBS.

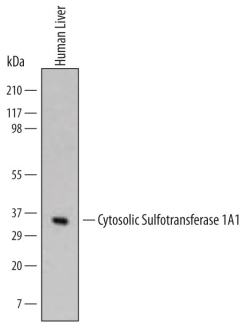
APPLICATIONS

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	0.5 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
Immunoprecipitation	25 µg/mL	Cell lysates spiked with Recombinant Human SULT1A1 (Catalog # 5546-ST), see our available Western blot detection antibodies

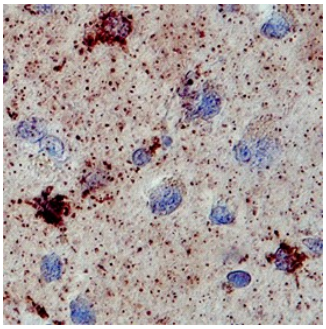
DATA

Western Blot



Detection of Human Cytosolic Sulfotransferase 1A1/SULT1A1 by Western Blot. Western blot shows lysates of human liver tissue. PVDF Membrane was probed with 0.5 µg/mL of Human Cytosolic Sulfotransferase 1A1/SULT1A1 Monoclonal Antibody (Catalog # MAB5546) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). A specific band was detected for Cytosolic Sulfotransferase 1A1/SULT1A1 at approximately 35 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



Cytosolic Sulfotransferase 1A1/SULT1A1 in Human Brain. Cytosolic Sulfotransferase 1A1/SULT1A1 was detected in immersion fixed paraffin-embedded sections of human brain using Human Cytosolic Sulfotransferase 1A1/SULT1A1 Monoclonal Antibody (Catalog # MAB5546) at 15 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neurons and glial cells (punctate). View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

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.** ● 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

Cytosolic Sulfotransferase 1A1 (SULT1A1; also phenol sulfotransferase 1 and thermostable phenol sulfotransferase) is a 35 kDa enzyme belonging to the sulfotransferase 1 family of proteins. Human SULT1A1 is 295 amino acids (aa) in length. Human SULT1A1 shares 78% and 73% aa identity with rat and mouse SULT1A1, respectively. SULT1A1 exists as a homodimer and is expressed in liver, lung, adrenal gland, brain, platelets, and skin. Functionally, it catalyzes the sulfate conjugation of catecholamines, phenolic drugs and neurotransmitter. It also mediates the metabolic activation of carcinogenic N-hydroxyarylamines to DNA binding products and could participate as a modulating factor of cancer risk.

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