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SULT1A1 [Knockdown Validated]

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8719b

Product Information

Application	WB, E
Primary Accession	P50225
Reactivity	Human, Mouse, Rat
Predicted	Human, Mouse, Rat
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,κ
Clone Names	2144CT289.81.2
Calculated MW	34165

Additional Information

Gene ID	6817
Other Names	Sulfotransferase 1A1, ST1A1, 2.8.2.1, Aryl sulfotransferase 1, HAST1/HAST2, Phenol sulfotransferase 1, Phenol-sulfating phenol sulfotransferase 1, P-PST 1, ST1A3, Thermostable phenol sulfotransferase, Ts-PST, SULT1A1, STP, STP1
Target/Specificity	This antibody is generated from a mouse immunized with a recombinant protein from human.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SULT1A1 [Knockdown Validated] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SULT1A1
Synonyms	STP, STP1
Function	Sulfotransferase that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as sulfonate donor to catalyze the sulfate conjugation of a wide variety of

acceptor molecules bearing a hydroxyl or an amine group. Sulfonation increases the water solubility of most compounds, and therefore their renal excretion, but it can also result in bioactivation to form active metabolites. Displays broad substrate specificity for small phenolic compounds. Plays an important role in the sulfonation of endogenous molecules such as steroid hormones (PubMed:12471039, PubMed:16221673, PubMed:21723874, PubMed:22069470, PubMed:7834621). Mediates the sulfate conjugation of a variety of xenobiotics, including the drugs acetaminophen and minoxidil (By similarity). Mediates also the metabolic activation of carcinogenic N-hydroxyarylamines leading to highly reactive intermediates capable of forming DNA adducts, potentially resulting in mutagenesis (PubMed:7834621). May play a role in gut microbiota-host metabolic interaction. O-sulfonates 4-ethylphenol (4-EP), a dietary tyrosine- derived metabolite produced by gut bacteria. The product 4-EPS crosses the blood-brain barrier and may negatively regulate oligodendrocyte maturation and myelination, affecting the functional connectivity of different brain regions associated with the limbic system (PubMed:35165440). Catalyzes the sulfate conjugation of dopamine (PubMed:8093002). Catalyzes the sulfation of T4 (L-thyroxine/3,5,3',5'- tetraiodothyronine), T3 (3,5,3'-triiodothyronine), rT3 (3,3',5'- triiodothyronine) and 3,3'-T2 (3,3'-diiodothyronine), with a substrate preference of 3,3'-T2 > rT3 > T3 > T4 (PubMed:10199779).

Cellular Location Cytoplasm.

Tissue Location Liver, lung, adrenal, brain, platelets and skin.

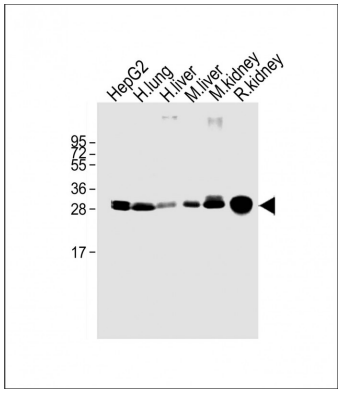
Background

Sulfotransferase that utilizes 3'-phospho-5'-adenylyl sulfate (PAPS) as sulfonate donor to catalyze the sulfate conjugation of catecholamines, phenolic drugs and neurotransmitters. Has also estrogen sulfotransferase activity. responsible for the sulfonation and activation of minoxidil. Is Mediates the metabolic activation of carcinogenic N- hydroxyarylamines to DNA binding products and could so participate as modulating factor of cancer risk.

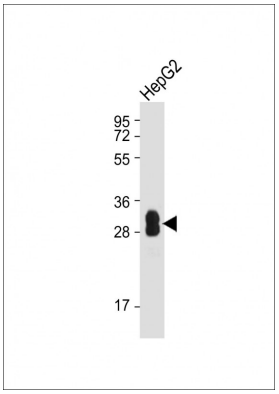
References

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Wilborn T.W.,et al.Mol. Pharmacol. 43:70-77(1993).
Yamazoe Y.,et al.Chem. Biol. Interact. 92:107-117(1994).
Hwang S.-R.,et al.Biochem. Biophys. Res. Commun. 207:701-707(1995).

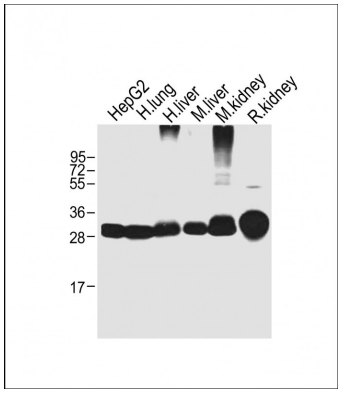
Images



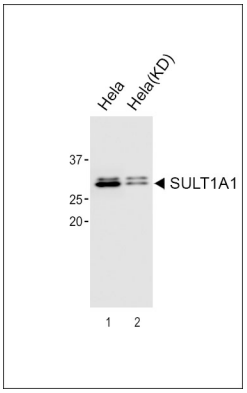
All lanes : Anti-SULT1A1 Antibody at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: human lung lysate Lane 3: human liver lysate Lane 4: mouse liver lysate Lane 5: mouse kidney lysate Lane 6: mouse lung lysate Lane 7: rat brain lysate Lane 8: rat kidney lysate Lane 9: CHO whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 21 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Anti-SULT1A1 at dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 34 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-SULT1A1 at dilution Lane 1: HepG2 whole cell lysate Lane 2: Human lung whole cell lysate Lane 3: Human liver whole cell lysate Lane 4: Mouse liver whole cell lysate Lane 5: Mouse kidney whole cell lysate Lane 6: Rat kidney whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 34 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



All lanes : Anti-SULT1A1 Antibody at 1:2000 dilution Lane 1: Hela Lane 2: Hela-Knockdown Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.