

SULT1A1 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2606B

Specification

SULT1A1 Antibody (Center) - Product Information

Application	WB,E
Primary Accession	P50225
Other Accession	P52846 , NP_001046
Reactivity	Human, Mouse
Predicted	Monkey
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Region	128-160

SULT1A1 Antibody (Center) - Additional Information

Gene ID 6817

Other Names

Sulfotransferase 1A1, ST1A1, 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 SULT1A1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 128-160 amino acids from the Central region of human SULT1A1.

Dilution

WB~~1:1000

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

SULT1A1 Antibody (Center) - 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 and 3,3'-diiodothyronin (PubMed:[10199779](#), 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-EP-S 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.

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:P17988}.

Tissue Location

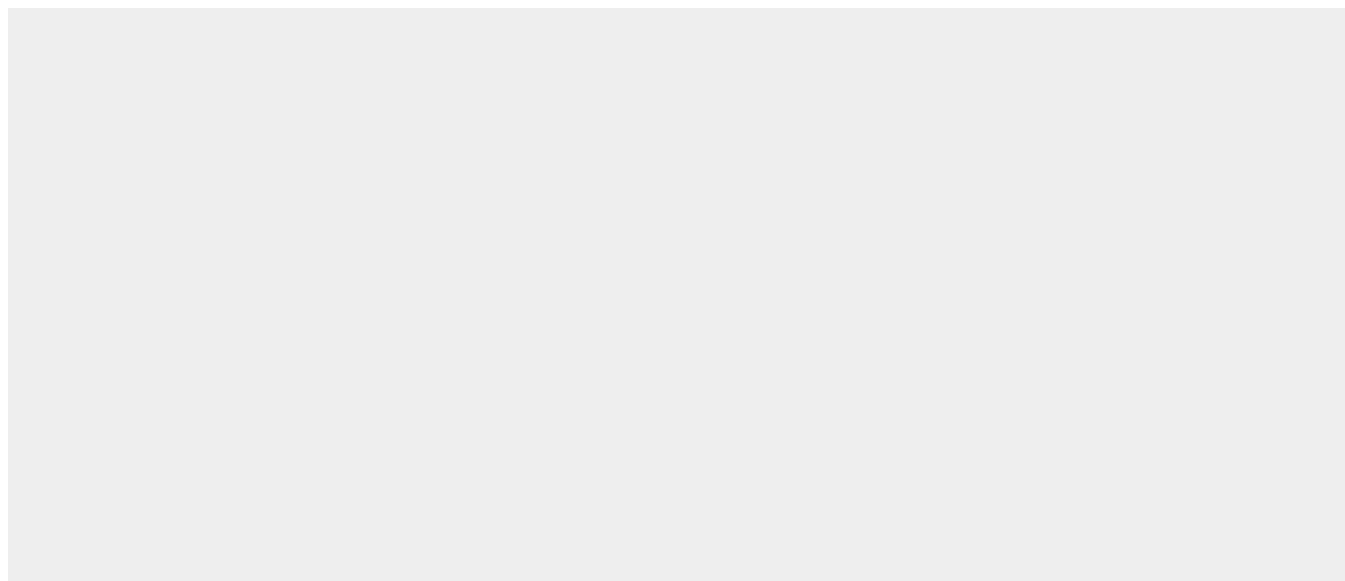
Liver, lung, adrenal, brain, platelets and skin.

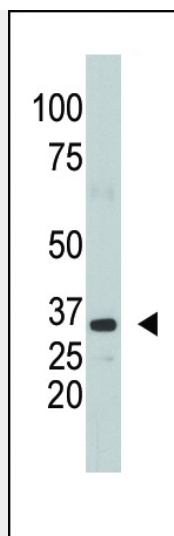
SULT1A1 Antibody (Center) - Protocols

Provided below are standard protocols that you may find useful for product applications.

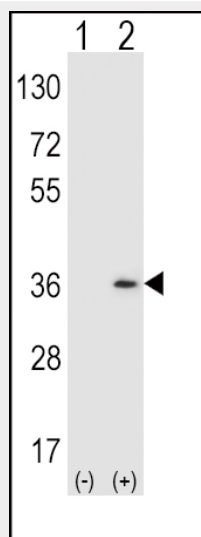
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SULT1A1 Antibody (Center) - Images





The anti-SULT1A1 Pab (Cat. #AP2606b) is used in Western blot to detect SULT1A1 in mouse kidney tissue lysate.



Western blot analysis of SULT1A1 (arrow) using rabbit polyclonal SULT1A1 Antibody (Y143) (Cat. #AP2606b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the SULT1A1 gene.

SULT1A1 Antibody (Center) - Background

Sulphation is a significant detoxification pathway for diverse xenobiotics, yet this modification also plays an important role in the metabolism and bioactivation of many dietary and environmental mutagens, including heterocyclic amines implicated in the pathogenesis of several cancers. A major human sulfotransferase, SULT1A1, metabolizes and/or bioactivates many endogenous compounds and is implicated in a range of cancers because of its ability to transform xenobiotics to cellular mutagens and carcinogens. Genetic polymorphisms in human sulfotransferase 1A1 SULT1A1 have a major impact on SULT1A1 enzyme activity and affect the risk for cancer development in humans. A G--->A transition at codon 213 (CGC/Arg to CAC/His) of the SULT1A1 gene has been identified (SULT1A1*2), and individuals homozygous for the His allele have a markedly lower activity and stability of this enzyme than those with the high activity SULT1A1*1 allozyme, which has been associated with protection against dietary toxins and reduced susceptibility to colorectal and breast cancers. There is an increasing incidence of SULT1A1*1 homozygosity and decreasing incidence of SULT1A1*2 homozygosity with increasing age, indicating a potential association of SULT1A1*1

allozyme(s) with protection against cell and/or tissue damage during aging. CLN3, the locus for Batten disease, maps to the same region 16p12.1-p11.2 as SULT12A1, making SULT1A1 a candidate gene for this disorder.

SULT1A1 Antibody (Center) - References

- Carcinogenesis 25 (5), 773-778 (2004)
- J. Biol. Chem. 279 (18), 18799-18805 (2004)
- Cancer Lett. 202 (1), 61-69 (2003)
- J. Biol. Chem. 278 (9), 7655-7662 (2003)
- Int. J. Cancer 103 (1), 101-104 (2003)
- Chem. Biol. Interact. 129 (1-2), 141-170 (2000)