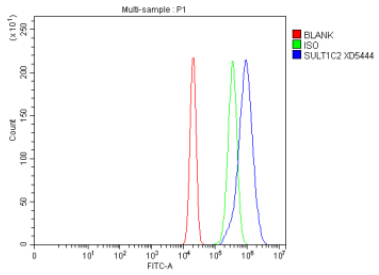
SULT1C2 Antibody / Sulfotransferase 1C2 (FY12741)

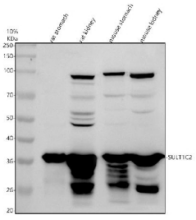
Catalog No.	Formulation	Size
FY12741	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O00338
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This SULT1C2 antibody is available for research use only.



Flow Cytometry analysis of RT4 cells using anti-SULT1C2 antibody. Overlay histogram showing RT4 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SULT1C2 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of SULT1C2 using anti-SULT1C2 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat stomach tissue lysates, Lane 2: rat kidney tissue lysates, Lane 3: mouse stomach tissue lysates, Lane 4: mouse kidney tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SULT1C2 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected ~35 kDa band is detected as a strong signal around 37 kDa, consistent with post-translationally modified SULT1C2. Additional minor bands at ~28-30 kDa and ~50 kDa likely represent truncated or aggregated forms commonly observed for cytosolic sulfotransferases.

Description

SULT1C2 antibody detects Sulfotransferase 1C2, a cytosolic enzyme that catalyzes the sulfation of hormones, xenobiotics, and small phenolic compounds, facilitating their metabolism and excretion. Encoded by the SULT1C2 gene on chromosome 2q12.3, this protein belongs to the sulfotransferase 1C family within the larger SULT superfamily of phase II metabolic enzymes. SULT1C2 uses the sulfate donor 3'-phosphoadenosine-5'-phosphosulfate (PAPS) to transfer sulfate groups to hydroxyl or amine substrates, increasing their solubility and promoting detoxification.

SULT1C2 is expressed mainly in fetal liver, kidney, and gastrointestinal tissues, with lower levels in adult organs. It plays an important role in the developmental regulation of xenobiotic metabolism. In the liver, SULT1C2 helps conjugate thyroid hormones, estrogens, and xenobiotic phenols, contributing to endocrine balance and protection from toxic compounds. Variations in SULT1C2 expression or activity influence drug metabolism, hormone clearance, and chemical susceptibility, making it relevant to pharmacogenetics and toxicology studies.

The SULT1C2 antibody is used to study enzymatic detoxification, hormone metabolism, and tissue-specific sulfation patterns. Western blot analysis identifies a 34 kilodalton band corresponding to SULT1C2, and immunohistochemistry reveals cytoplasmic localization in hepatocytes and renal tubular cells. This antibody supports research into the biochemical pathways of sulfate conjugation and developmental regulation of phase II metabolism. Because sulfotransferases influence drug bioavailability and toxicity, the SULT1C2 antibody is a valuable reagent for pharmacological and toxicological investigations.

Beyond metabolism, SULT1C2 may participate in cell signaling and differentiation by modulating the availability of bioactive molecules. Altered expression has been observed in cancers of the colon, liver, and lung, suggesting roles in tumor metabolism and chemical carcinogen processing. NSJ Bioreagents provides the SULT1C2 antibody validated for its applications, ensuring specificity in studies of metabolic enzyme regulation and drug response variability.

Application Notes

Optimal dilution of the SULT1C2 antibody should be determined by the researcher.

Immunogen

E.coli-derived human SULT1C2 recombinant protein (Position: M1-Q251) was used as the immunogen for the SULT1C2 antibody.

Storage

After reconstitution, the SULT1C2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.