**BACKGROUND**

The soluble sulfotransferases contribute to the elimination of xenobiotics, the activation of procarcinogens and the regulation of hormones by catalyzing the sulfate conjugation of these substances. Members of the three groups comprising this superfamily show selectivity to certain substrate compounds. SULT1 sulfotransferases exhibit N-sulfating activities of carcinogenic heterocyclic amines, and are selective toward phenols, whereas SULT2 enzymes prefer hydroxysteroids and SULT3 family members are selective for N-substituted aroyl and alicyclic compounds. High SULT1 activity is associated with an increased protection against many of the carcinogens that lead to colorectal cancer. Activity of the SULT1A1 allele is higher in the elderly, possibly because of protection conferred by SULT1 against cell and tissue damage brought on by aging.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: SULT1A1/SULT1A2/SULT1A3 (human) mapping to 16p11.2; Sult1a1 (mouse) mapping to 7 F3, Sult2a2/Sult2a3 (mouse) mapping to 7 A1.

**SOURCE**

SULT1 (B-4) is a mouse monoclonal antibody raised against amino acids 51-105 mapping within an internal region of SULT1A1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. SULT1 (B-4) is available conjugated to agarose (sc-376159 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376159 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376159 PE), fluorescein (sc-376159 FITC), Alexa Fluor® 488 (sc-376159 AF488), Alexa Fluor® 546 (sc-376159 AF546), Alexa Fluor® 594 (sc-376159 AF594) or Alexa Fluor® 647 (sc-376159 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376159 AF680) or Alexa Fluor® 790 (sc-376159 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM. Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**APPLICATIONS**

SULT1 (B-4) is recommended for detection of SULT1A1, SULT1A2 and SULT1A3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); partially cross reactive with other SULT family members. Molecular Weight of SULT1: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or SULT1 (h): 293 Lysate: sc-110796.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:

1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminal Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

**DATA**

**STORAGE**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.