SANTA CRUZ BIOTECHNOLOGY, INC.

SULT1A3/1A4 (A-24): sc-135674

BACKGROUND

SULT1A3 (sulfotransferase family, cytosolic, 1A, phenol-preferring, member 3) and SULT1A4 (sulfotransferase family, cytosolic, 1A, phenol-preferring, member 4) are identical proteins (referred to simply as SULT1A3/1A4) that are 295 amino acids in length and localize to the cytoplasm. Expressed in brain, liver, colon, lung, placenta, kidney and spleen tissue, SULT1A3/1A4 exists as a homodimer that functions to catalyze the sulfate conjugation of phenolic and catechol drugs, as well as neurotransmitters, including Serotonin, dopamine and norepinephrine. Multiple isoforms of SULT1A3/1A4 exist due to alternative splicing events. The genes encoding SULT1A3 and SULT1A4 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

1. Zhu, X., Veronese, M.E., Bernard, C.C., Sansom, L.N. and McManus, M.E. 1993. Identification of two human brain aryl sulfotransferase cDNAs. Biochem. Biophys. Res. Commun. 195: 120-127.
2. Dooley, T.P. and Huang, Z. 1996. Genomic organization and DNA sequences of two human phenol sulfotransferase genes (STP1 and STP2) on the short arm of chromosome 16. Biochem. Biophys. Res. Commun. 228: 134-140.
3. Glatt, H. 2000. Sulfotransferases in the bioactivation of xenobiotics. Chem. Biol. Interact. 129: 141-170.

CHROMOSOMAL LOCATION

Genetic locus: SULT1A3/SULT1A4 (human) mapping to 16p11.2; Sult1a1 (mouse) mapping to 7 F3.

SOURCE

SULT1A3/1A4 (A-24) is a rabbit polyclonal antibody raised against recombinant SULT1A3/1A4 protein of human origin.

PRODUCT

Each vial contains IgG in 100 µl of 10 mM HEPES with 150 mM NaCl, 50% glycerol and < 0.1% BSA.

APPLICATIONS

SULT1A3/1A4 (A-24) is recommended for detection of SULT1A3/1A4 of human origin and SULT1A1 of mouse and rat origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 µl per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

Suitable for use as control antibody for SULT1A1 siRNA (m): sc-155969, SULT1A1 shRNA Plasmid (m): sc-155969-SH and SULT1A1 shRNA (m) Lentiviral Particles: sc-155969-V.

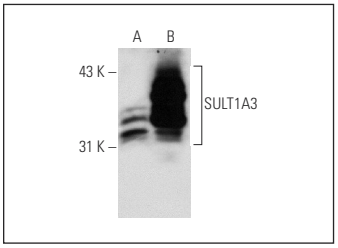
Molecular Weight of SULT1A3/1A4: 34 kDa.

Positive Controls: SULT1A3 (h2): 293T Lysate: sc-174388.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



SULT1A3/1A4 (A-24): sc-135674. Western blot analysis of SULT1A3 expression in non-transfected: sc-117752 (**A**) and human SULT1A3 transfected: sc-174388 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Chen, X., Yang, T.T., Zhou, Y., Wang, W., Qiu, X.C., Gao, J., Li, C.X., Long, H., Ma, B.A., Ma, Q., Zhang, X.Z., Yang, L.J. and Fan, Q.Y. 2014. Proteomic profiling of osteosarcoma cells identifies ALDOA and SULT1A3 as negative survival markers of human osteosarcoma. Mol. Carcinog. 53: 138-144.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

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