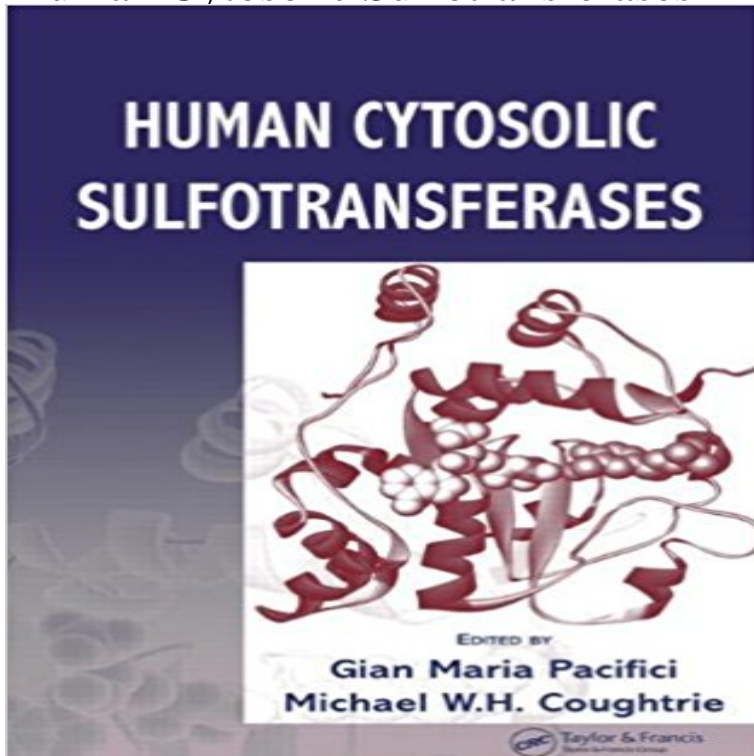


## Human Cytosolic Sulfotransferases



The existence of multiple sulfotransferases (SULTS) was first discovered in 1958. Since then, any attempts to create a comprehensive text dedicated to sulfation and sulfotransferases have been rare and, thanks to rapid advances in molecular biology and biochemistry, quickly outdated. However, those advances have permitted an accelerated understanding of human sulfotransferase activity and with it the creation of a growing database on sulfotransferases that, until now, has remained scattered in the literature. *Human Cytosolic Sulfotransferases* serves an important function by the mere feat of culling the information from the literature to present an up-to-date summary of the field. Fortunately, the editors have gone a step further in providing us with a multidisciplinary overview of human sulfotransferases, covering not only basic biochemistry, genetics, and molecular biology, but also exploring current clinical uses involving pharmacology, enzymology, and environmental toxicology. The book's thirteen chapters, written by some of the most renowned scientists in the field, address the huge diversity of topics that are impacted by sulfation. Included are discussions that move from general nomenclature and structure to molecular cloning of human cytosolic sulfotransferases, and sulfate conjugation in pharmacogenetics and pharmacogenomics. Entire chapters focus on sulfotransferases in the human fetus and neonate, sulfation of thyroid hormones, as well as estrogen sulfotransferases in breast cancer and the activation/inactivation of carcinogens and mutagens by human sulfotransferases.

Human Sulfotransferases and Their Role in Chemical Metabolism Nine crystal structures of human cytosolic SULTs have now been determined, and together **Sulfate conjugation of daphnetin by the human cytosolic** *J Appl Toxicol.* 2016 Sep36(9):1090-4. doi: 10.1002/jat.3268. Epub 2015 Dec 11. Sulfation of benzyl alcohol by the human cytosolic

sulfotransferases (SULTs): **Enzymatic characterization of human cytosolic sulfotransferases** May 20, 2016 Sulfate conjugation of daphnetin by the human cytosolic sulfotransferases. Han Z(1), Xi Y(1), Luo L(2), Zhou C(2), Kurogi K(3), Sakakibara Y(4), **Human Sulfotransferases and Their Role in Chemical Metabolism** Biol Pharm Bull. 201639(9):1432-6. doi: 10.1248/bpb.b16-00015. Human Cytosolic Sulfotransferase SULT1A3 Mediates the Sulfation of Dextrorphan. **Sulfation of phenylephrine by the human cytosolic sulfotransferases.** Pharmacogenetics of human cytosolic sulfotransferases. S Nowell and C N Falany. 1University of Arkansas for Medical Sciences, Little Rock, AR, USA **Enzymology of human cytosolic sulfotransferases. - NCBI - NIH Drug Metab Lett.** 20148(2):96-100. Sulfation of phenylephrine by the human cytosolic sulfotransferases. Yamamoto A, Kim J, Liu MY, Kurogi K, Sakakibara Y, **Structural and chemical profiling of the human cytosolic - NCBI Biol Pharm Bull.** 1999 May22(5):446-52. Enzymatic characterization of human cytosolic sulfotransferases identification of ST1B2 as a thyroid hormone **Sulfation of benzyl alcohol by the human cytosolic sulfotransferases** Mar 13, 2006 Pharmacogenetics of human cytosolic sulfotransferases. Cytosolic sulfotransferases (SULTs) are phase II detoxification enzymes that are **Human Cytosolic Sulfotransferase 1A1/SULT1A1 Antibody AF5546** At least four cytosolic sulfotransferases (STs) have been identified and characterized from human tissues. These enzymes are two forms of phenol ST (PST), the **Human Cytosolic Sulfotransferase 1B1/SULT1B1 Antibody AF5959** **Pharmacogenetics of human cytosolic sulfotransferases. - NCBI** Detection of Human Cytosolic Sulfotransferase 1E1/SULT1E1 by Western Blot. Western blot shows lysates of human liver tissue. PVDF membrane was probed **Structural plasticity in the human cytosolic sulfotransferase dimer** Pharmacogenetics of human cytosolic sulfotransferases. S Nowell and C N Falany. 1University of Arkansas for Medical Sciences, Little Rock, AR, USA **Human Cytosolic Sulfotransferase SULT1A3 Mediates the Sulfation** Jun 25, 2015 Sulfation of afimoxifene, endoxifen, raloxifene, and fulvestrant by the human cytosolic sulfotransferases (SULTs): A systematic analysis. **Human Cytosolic Sulfotransferase 1E1/SULT1E1 Antibody** Jul 9, 2009 24-hydroxycholesterol sulfation by human cytosolic sulfotransferases: formation of monosulfates and disulfates, molecular modeling, sulfatase **none** Pharmacogenomics J. 20044(1):54-65. Human cytosolic sulfotransferase database mining: identification of seven novel genes and pseudogenes. Freimuth **Steroid sulfation by expressed human cytosolic sulfotransferases.** Apr 10, 2007 To date, 13 human cytosolic sulfotransferase (hSULT) genes have been identified they partition into four families [2,3]: SULT1, SULT2, SULT4, **24-hydroxycholesterol sulfation by human cytosolic - NCBI - NIH** Nov 5, 2014 Structural plasticity in the human cytosolic sulfotransferase dimer and its role in substrate selectivity and catalysis. Tibbs ZE(1), Rohn-Glowacki **Human Cytosolic Sulfotransferases - Springer** Apr 10, 2007 To date, 13 human cytosolic sulfotransferase (hSULT) genes have been identified they partition into four families [2,3]: SULT1, SULT2, SULT4, **Sulphation of acetaminophen by the human cytosolic - NCBI - NIH J Steroid Biochem Mol Biol.** 1994 Mar48(4):369-75. Steroid sulfation by expressed human cytosolic sulfotransferases. Falany CN(1), Wheeler J, Oh TS, Falany **Cytosolic sulfotransferases - NOPR** Abstract. Sulfation is a major reaction in phase II drug and xenobiotic metabolism. It is catalyzed by a family of enzymes, the sulfotransferases (SULTs), and **Structural and Chemical Profiling of the Human Cytosolic** Detection of Human Cytosolic Sulfotransferase 1A1/SULT1A1 by Western Blot. Western blot shows lysates of HEK293 human embryonic kidney cell line and **Human cytosolic sulfotransferase database mining: identification of** Jun 11, 2015 This study aimed to systematically identify the major human cytosolic sulfotransferase (SULT) enzyme(s) responsible for the sulphation of **Structure, function and polymorphism of human cytosolic - NCBI Eur J Pharmacol.** 201:125-9. doi: 10.1016/.2015.04.039. Epub 2015 May 2. Sulfation of ritodrine by the human cytosolic sulfotransferases **Oncogene - Pharmacogenetics of human cytosolic sulfotransferases** At least four cytosolic sulfotransferases (STs) have been identified and characterized from human tissues. These enzymes are two forms of phenol ST (PST), the **Sulfation of benzyl alcohol by the human cytosolic sulfotransferases** PLoS Biol. 2007 May5(5):e97. Structural and chemical profiling of the human cytosolic sulfotransferases. Allali-Hassani A(1), Pan PW, Dombrowski L, **Pharmacogenetics of human cytosolic sulfotransferases - Nature** Dec 11, 2015 Abstract. The aim of the present study was to identify human cytosolic sulfotransferases (SULTs) that are capable of sulfating benzyl alcohol **Sulfation of ritodrine by the human cytosolic sulfotransferases** Jun 11, 2015 Sulphation of acetaminophen by the human cytosolic sulfotransferases: a systematic analysis. Yamamoto A(1), Liu MY(2), Kurogi K(1), **Sulfation of ritodrine by the human cytosolic sulfotransferases (SULTs)** Curr Drug Metab. 2008 Feb9(2):99-105. Structure, function and polymorphism of human cytosolic sulfotransferases. Lindsay J(1), Wang LL, Li Y, Zhou SF. **Enzymology of human cytosolic sulfotransferases.** humans. Sulfation reaction in living cells is reversed by sulfatase, which of the structure of mammalian cytosolic sulfotransferases and their role in human. **Sulfation of afimoxifene, endoxifen, raloxifene, and**

**fulvestrant by the** May 2, 2015 Previous studies have demonstrated the metabolism of ritodrine through sulfation. The current study was designed to identify the human SULTs