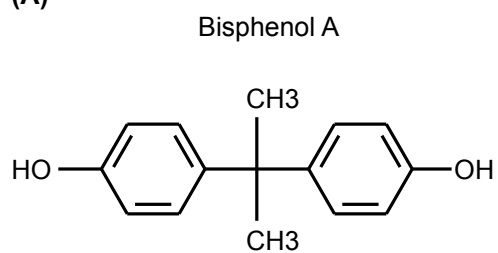
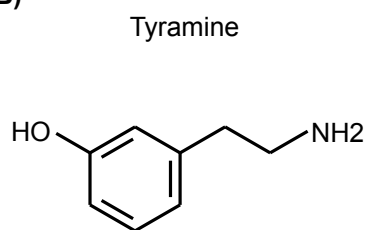


Fig S1
(A)



(B)



(C)

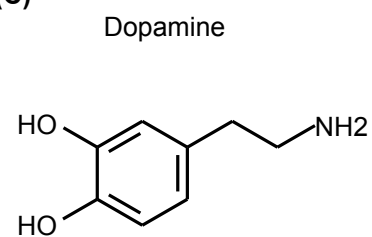


Fig. S1: Molecular structures of St form inducing chemicals; Bisphenol A, Tyramine and Dopamine.

Fig S2

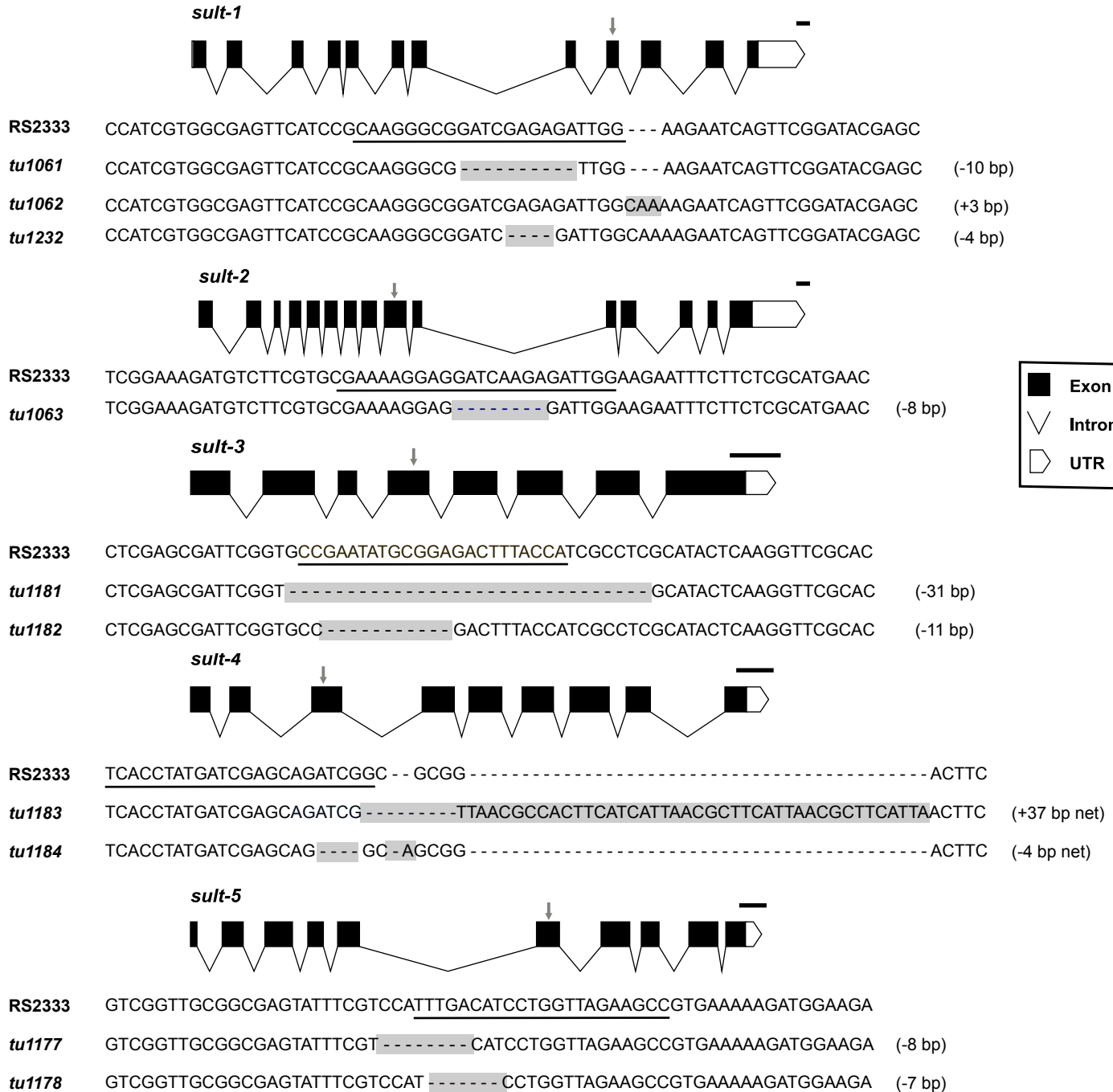


Fig. S2: Mutant alleles of sult-1, sult-2, sult-3, sult-4 and sult-5 produced using CRISPR/Cas9 technique. Arrows and underlined texts indicate sgRNA sequence including PAM of respective genes. Induced genetic lesions are highlighted in grey. Scale bar represents 100 bp.

Fig S3

WT	MVPRADDFVICTYPKCGTTWIQHIVHQLLKGTEYETAVDDDENDNVACQPSSSSHEKSEE	60
<i>sult-1(tu1061)</i>	MVPRADDFVICTYPKCGTTWIQHIVHQLLKGTEYETAVDDDENDNVACQPSSSSHEKSEE	60
<i>sult-1(tu1232)</i>	MVPRADDFVICTYPKCGTTWIQHIVHQLLKGTEYETAVDDDENDNVACQPSSSSHEKSEE	60

WT	DEKKAMCFVSPMIERMGAAYSDTIKTPRVLKSHFTYKNIPKGGGAKYIFAVRNPDKCLTS	120
<i>sult-1(tu1061)</i>	DEKKAMCFVSPMIERMGAAYSDTIKTPRVLKSHFTYKNIPKGGGAKYIFAVRNPDKCLTS	120
<i>sult-1(tu1232)</i>	DEKKAMCFVSPMIERMGAAYSDTIKTPRVLKSHFTYKNIPKGGGAKYIFAVRNPDKCLTS	120

WT	YFHNNRNFKIYDYEHEGFDFVFFKLFMDGKVGFGDYFDHLTSWLEGIEKAERILFLKYED	180
<i>sult-1(tu1061)</i>	YFHNNRNFKIYDYEHEGFDFVFFKLFMDGKVGFGDYFDHLTSWLEGIEKAERILFLKYED	180
<i>sult-1(tu1232)</i>	YFHNNRNFKIYDYEHEGFDFVFFKLFMDGKVGFGDYFDHLTSWLEGIEKAERILFLKYED	180

WT	MVADLHSAVVQIASFLGGKAAEIIENDQKLAQIVEASTLASMKKNQQRWFPNKQLHRGEF	240
<i>sult-1(tu1061)</i>	MVADLHSAVVQIASFLGGKAAEIIENDQKLAQIVEASTLASMKKNQQRWFPNKQLHRGEF	240
<i>sult-1(tu1232)</i>	MVADLHSAVVQIASFLGGKAAEIIENDQKLAQIVEASTLASMKKNQQRWFPNKQLHRGEF	240

WT	IRKGGSRDWKNQFGYEQS-FEMD--KKFRER-CAGTAAAEWWHSEMA-WNVS RPVVAVEP	295
<i>sult-1(tu1061)</i>	IRKG--VGRISSDTSNPSKWTRSSGNAARAQPLPSGGTARWPGTSVDPSSLSNPSAKCLP	298
<i>sult-1(tu1232)</i>	IRKGGSIGRISSDTSNPSKWTRSSGNAARAQPLPSGGTARWPGTSVDPSSLSNPSAKCLP	300
	**** . .. : * : . : * : . . : * * : : : . : * * . *	
WT	ISEVSSYSSSGFCSASPLSFTSSSLDLSSSLSSH-LRLPSVNPESDLCYSPAVEGPLDRD	354
<i>sult-1(tu1061)</i>	IRRRRA-----SAPPRLSPSLHHHWISLPHSH---RISDSPQ-----	331
<i>sult-1(tu1232)</i>	IRRRRA-----SAPPRLSPSLHHHWISLPHSH---RISDSPQ-----	333
	* . : * : ** ** * : ** : : . **	
WT	RVDSLQFPFDLKLKIDDATEEQD	376
<i>sult-1(tu1061)</i>	-----	331
<i>sult-1(tu1232)</i>	-----	333

Fig. S3: Alignment of WT and mutant versions of SULT-1.

Multiple sequence alignment SULT-1 amino acid sequences in WT and mutant alleles tu1061 and tu1232 using clustal Omega.

Table S1: Sites for single guide RNA (sg-RNA) sequences

<i>sult-1</i>	GCAAGGGCGGATCGAGAGATTGG
<i>sult-2</i>	GAAAAGGAGGATCAAGAGATTGG
<i>sult-3</i>	TGGTAAAGTCTCCGCATATTCCG
<i>sult-4</i>	TATGATCGAGCAGATCGGCGCGG
<i>sult-5</i>	ATTCGTCCATTTGACATCCTGG

Table S2: Primer sequences for qPCR of sulfotransferase genes after CRISPR

Gene	Forward primer	Reverse primer
<i>sult-1</i>	CAAAGATGGTTCCTAACCAAGCA	GATGAAGTGAAGGAGAGAGGCGA
<i>sult-2</i>	GGTTGGACTTGGTGATTACTTCG	GCTAGTTCTCATCTTCCAAGAACCC
<i>sult-3</i>	AGCGGTGGTGAAGCAAATGG	CCGGGAACTAAAGATTGTG
<i>sult-4</i>	GACGGCGATTCTTGTTGC	GGCCGTTTAGCCTGTATTGT
<i>sult-5</i>	CAGAATCTTACGTACCTT	GTAAGTAGTGAATTCTTGAA

Table S3: Primer sequences for examining *sult-1* expression levels with qRT PCR

Gene	Forward primer	Reverse primer
<i>Ppa-sult-1</i>	GTTTCATGGATGGAAAGGTCGGATTCCG	TGAGGCTTCGACTATCTGAGCCAG
<i>Ppa-cdc-42</i>	CTCTCTTATCCACAGACGGAC	GAAGGGAGTGCGTGAGCAGTG
<i>Ppa-β-tubulin</i>	CTCGGAGGAGGAACTGGATC	GACCGTGTCAGAGACCTTAG