Supporting Information

PENTACHLOROPHENOL AND OTHER CHLORINATED PHENOLS ARE SUBSTRATES FOR HUMAN HYDROXYSTEROID SULFOTRANSFERASE hSULT2A1

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Supporting information available:

Step	Volume (mL)	Total Activity (nmol/min)	Total Protein (mg)	Specific Activity [a] (nmol/min/mg)
1. Cell Extract	20	16700	1000	16.7
2. DE52	18	14000	391	35.9
3. Hydroxyapatite1	27	6890	113	60
4. Hydroxyapatite2	17	2910	36	80

Table S1. Summary of the purification of hSULT2A1.

[a] Specific activity refers to the sulfation of dehydroepiandrosterone (DHEA) at pH 5.5. Assay mixtures containing 50 µM DHEA, 200 µM PAPS, 7.5 mM 2-mercaptoethanol, 10-30 µl of protein obtained after each step and 0.25 mM sodium acetate buffer were incubated at 37^{o}C for 30 min.

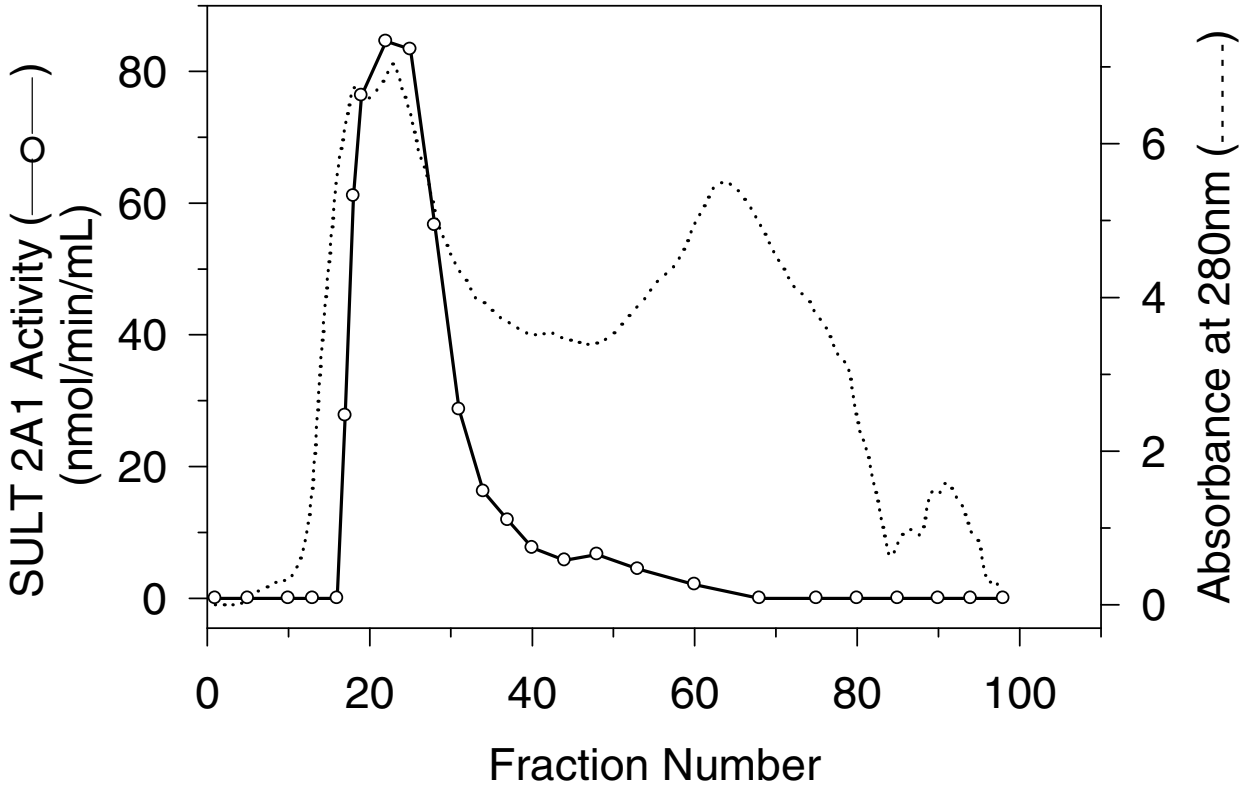

Figure S1. Elution profile of DE-52 column following initial removal of non-binding protein. The dashed line represents general protein absorbance recorded at 280 nm, and the solid line indicates the enzymatic activity of hSULT2A1 at pH 5.5 with 50 μM DHEA as substrate.

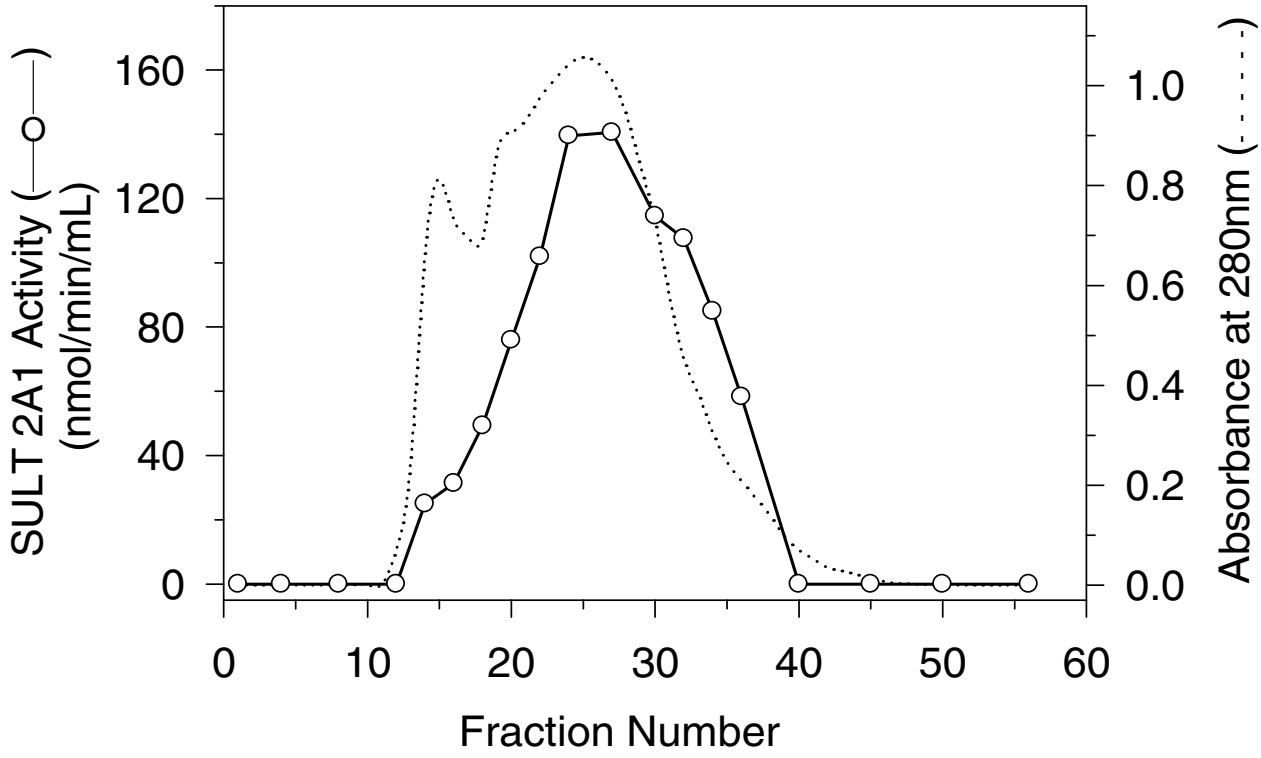

Figure S2. Elution profile of the first hydroxyapatite column following initial removal of non-binding protein. The dashed line represents general protein absorbance recorded at 280 nm, and the solid line indicates the enzymatic activity of hSULT2A1 at pH 5.5 with 50 μM DHEA as substrate.

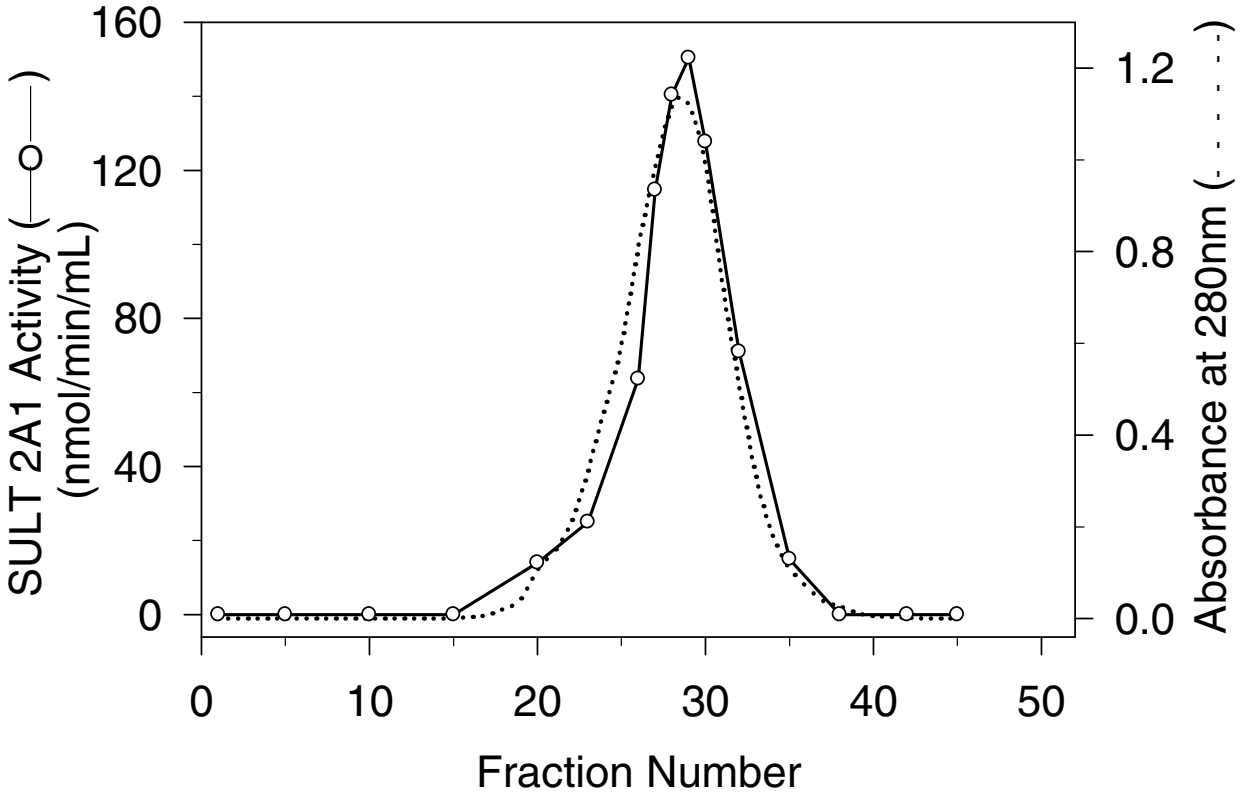

Figure S3. Elution profile of the second hydroxyapatite column following initial removal of non-binding protein. The dashed line represents general protein absorbance recorded at 280 nm, and the solid line indicates the enzymatic activity of hSULT2A1 at pH 5.5 with 50 μM DHEA as substrate.

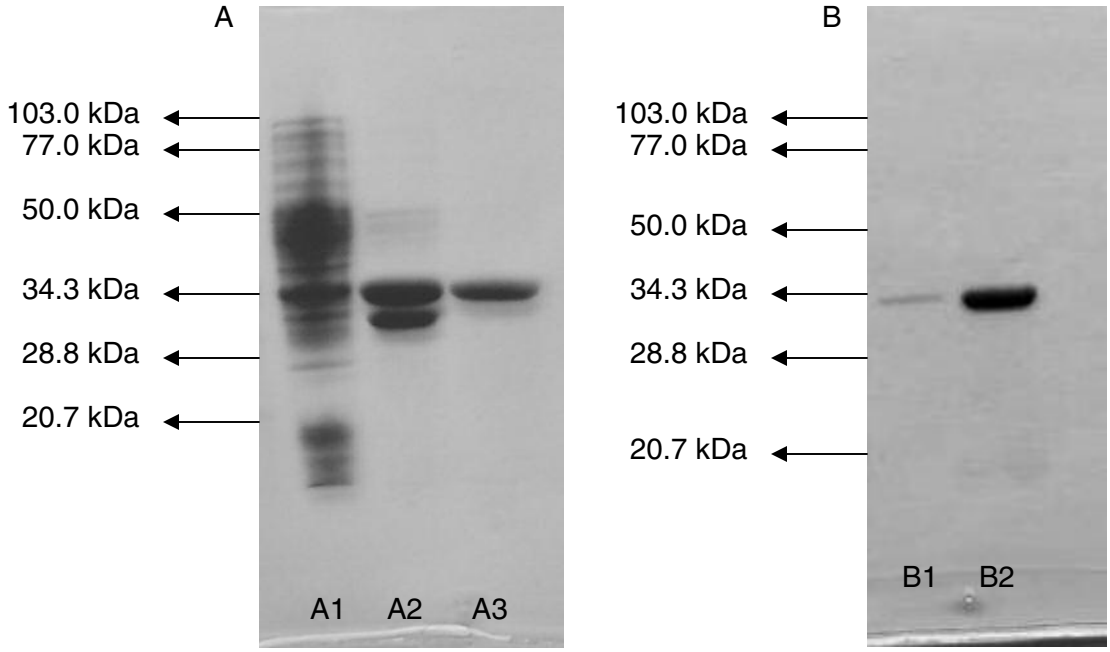

Figure S4. SDS-PAGE of hSULT2A1 at each step of the purification procedure. Part A: SDS-PAGE results obtained after each purification step; A1, Cell extract; A2, DE52 column; A3, 1st Hydroxyapatite column. Part B: SDS-PAGE results for the purified enzyme after the second hydroxyapatite column; B1, Purified enzyme (1µg); B2, Purified enzyme (5µg).