

**Supplemental Table 3: Pearson correlation coefficient of genes calculated in GTEx**

	ESR1	ESR2	SHH	PTCH1	SMO	GLI1	OCLN	CLDN3	CLDN5
ESR1	R=1 P=0	R=0.59 P=0	R=0.3 P=0	R=0.5 P=0	R=0.19 P=3.6e-09	R=0.34 P=0	R=0.34 P=0	R=0.4 P=0	R=-0.00061 P=0.98
ESR2	R=0.59 P=0	R=1 P=0	R=0.049 P=0.13	R=0.81 P=0	R=0.16 P=1.1e-06	R=0.53 P=0	R=0.5 P=0	R=0.71 P=0	R=-0.013 P=0.68
SHH	R=0.3 P=0	R=0.049 P=0.13	R=1 P=0	R=-0.12 P=0.00031	R=0.08 P=0.012	R=0.088 P=0.0061	R=-0.039 P=0.22	R=-0.14 P=1.2e-05	R=0.14 P=1.1e-05
PTCH1	R=0.5 P=0	R=0.81 P=0	R=-0.12 P=0.00031	R=1 P=0	R=0.19 P=9.6e-10	R=0.61 P=0	R=0.51 P=0	R=0.78 P=0	R=-0.16 P=3.9e-07
SMO	R=0.19 P=3.6e-09	R=0.16 P=1.1e-06	R=0.08 P=0.012	R=0.19 P=9.6e-10	R=1 P=0	R=0.34 P=0	R=0.17 P=8.1e-08	R=0.14 P=9.9e-06	R=0.26 P=0
GLI1	R=0.34 P=0	R=0.53 P=0	R=0.088 P=0.0061	R=0.61 P=0	R=0.34 P=0	R=1 P=0	R=0.24 P=7.5e-14	R=0.46 P=0	R=-0.079 P=0.014
OCLN	R=0.34 P=0	R=0.5 P=0	R=-0.039 P=0.22	R=0.51 P=0	R=0.17 P=8.1e-08	R=0.24 P=7.5e-14	R=1 P=0	R=0.48 P=0	R=0.17 P=4e-08
CLDN3	R=0.4 P=0	R=0.71 P=0	R=-0.14 P=1.2e-05	R=0.78 P=0	R=0.14 P=9.9e-06	R=0.46 P=0	R=0.48 P=0	R=1 P=0	R=-0.11 P=0.00053
CLDN5	R=-0.00061 P=0.98	R=-0.013 P=0.68	R=0.14 P=1.1e-05	R=-0.16 P=3.9e-07	R=0.26 P=0	R=-0.079 P=0.014	R=0.17 P=4e-08	R=-0.11 P=0.00053	R=1 P=0