

**Table S2. SNV characteristics in relevant cohorts.**

Cohort	Allele Characteristics	<i>SLC13A1</i> rs28364172 (R12X)		<i>SLC13A1</i> rs138275989 (W48X)		<i>SLC13A1</i> rs2140516, (N174S)		<i>SLC13A1</i> rs139376972 (R237C)		<i>SLC26A1</i> rs148386572 (L348P)	
		G	A	C	T	T	C	G	A	A	G
		<b>1000g<sub>(EUR)</sub></b>	<b>Allele Freq. (%)</b>	99.60	0.40	99.90	0.10	66.30	33.70	n/a	n/a
<b>ESP<sub>(EA)</sub></b>	<b>Allele Freq. (%)</b>	99.77	0.23	99.80	0.20	68.49	31.51	99.84	0.16	99.78	0.22
<b>Old Order Amish</b>	<b>Allele Freq. (%)</b>	99.71	0.29	99.26	0.74	60.61	39.39	98.26	1.74	93.19	6.81
	<b>Homozygotes</b>	3901	0	3726	0	621	255	1666	1	1503	13
	<b>Heterozygotes</b>	23		56		848		58		209	
	<b><i>P</i><sub>HWE</sub></b>	0.85		0.65		0.21		0.55		0.08	
	<b>Total</b>	3924		3782		1724		1725		1725	
<b>Sulfate Cohort</b>	<b>Allele Freq. (%)</b>	99.13	0.87	98.00	2.00	60.67	39.33	97.06	2.94	93.67	6.33
	<b>Homozygotes</b>	960	0	938	0	333	141	848	1	792	6
	<b>Heterozygotes</b>	17		39		426		51		102	
	<b><i>P</i><sub>HWE</sub></b>	0.78		0.52		0.81		0.80		0.18	
	<b>Total</b>	977		977		900		900		900	

Abbreviations: 1000g(EUR), Total European Ancestry population from 1000 Genomes; ESP(EA), European American population from the National Heart, Lung, and Blood Institute (NHLBI) Exome Sequencing Project (ESP); Freq., frequency; HWE, Hardy-Weinberg Equilibrium.