

**Table S3. Urinary sulfate levels and *SLC13A1* genotype.**

| <b>Genotype</b>  | <b><math>\Delta OD_{600}</math><br/>1</b> | <b>2</b> | <b><math>\Delta OD_{600}</math><br/>(Avg.)</b> | <b>Sulfate<br/>(mM)</b> |
|--|---|----------|--|-------------------------|
| <u>SLC13A1</u><br><u>SLC13A1</u>                                       | 0.283                                     | 0.280    | 0.282  | 51.5                    |
| <u>SLC13A1</u><br><u>SLC13A1</u>                                       | 0.407                                     | 0.399    | 0.403  | 73.7                    |
| <u>SLC13A1</u><br><u>SLC13A1</u>                                       | 0.379                                     | 0.377    | 0.378  | 69.2                    |
| <u><math>\Delta</math>slc13a1</u><br><u>SLC13A1</u>                    | 0.519                                     | 0.511    | 0.515  | 94.2                    |
| <u><math>\Delta</math>slc13a1</u><br><u>SLC13A1</u>                    | 0.551                                     | 0.549    | 0.550  | 100.7                   |
| <u><math>\Delta</math>slc13a1</u><br><u><math>\Delta</math>slc13a1</u> | 0.575                                     | 0.573    | 0.574  | 105.0                   |

A heterozygous dog had an unusually low urinary sulfate measure (2.1 mM; 25-fold below any other measure). We interpreted this as a technical failure and excluded the sample from further analysis.

Insufficient sample size precluded testing for hypersulfaturia in affected dogs specifically. However, a difference exists in the mean urinary sulfate levels between wildtype dogs ( $64.8 \pm 11.7$  mM) and dogs with at least one copy of the deletion ( $100.0 \pm 5.4$  mM). This difference is statistically significant ( $p = 0.02$ ; two-tailed t-test).