

Figure S1: Latency to first USV occurrence

The latencies to the first USV occurrence in experiment 1 (water) and experiment 2 (female urine) are shown as means +/- standard deviations or as boxplots (median, quartiles, range; in cases when data were not normally distributed) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line. Heterozygous animals of the *R552H*-line responded significantly faster to female urine compared to water. For further explanations see figure 1.

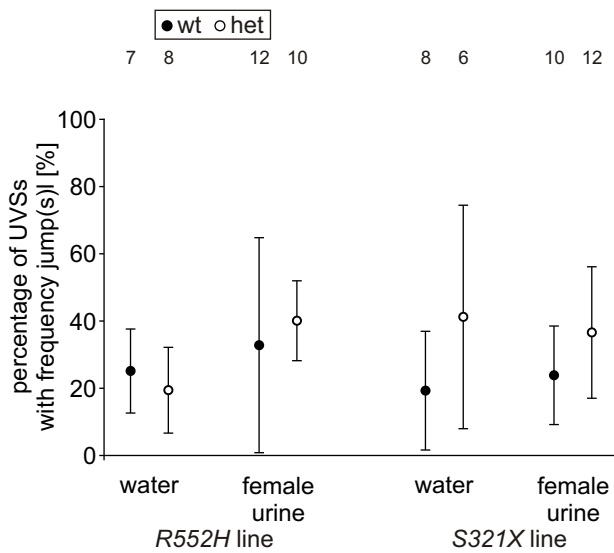


Figure S2: Percentage of USVs with frequency jump(s)

The average percentages of USVs (mean +/- standard deviation) with frequency jump(s), i.e. USVs with at least one frequency jump, are shown for the wt and het groups of each *Foxp2* mouse line in experiment 1 (water) and experiment 2 (urine). In the het group of the *R552H*-line urine released significantly more USVs with frequency jump(s) than water. For further explanations see figure 1.

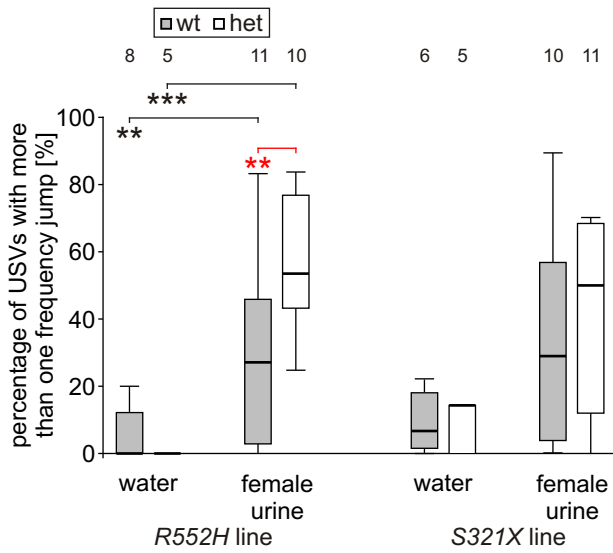


Figure S3: Percentage of USVs with more than one frequency jump

The average percentages of USVs with more than one frequency jump are shown as boxplots (median, quartiles, range) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine led to higher rates of USVs with more than one frequency jump than water. For further explanations see figures 1, S1.

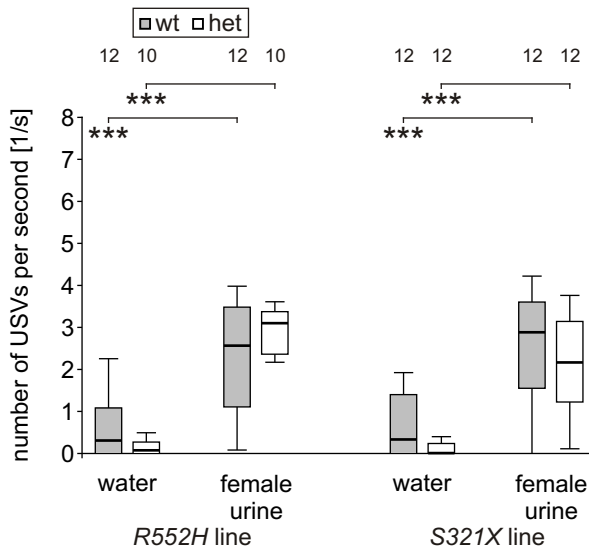


Figure S4: Number of USVs per second

The average numbers of USVs per second are shown as boxplots (median, quartiles, range) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine released significantly more USVs than water. For further explanations see figures 1, S1.

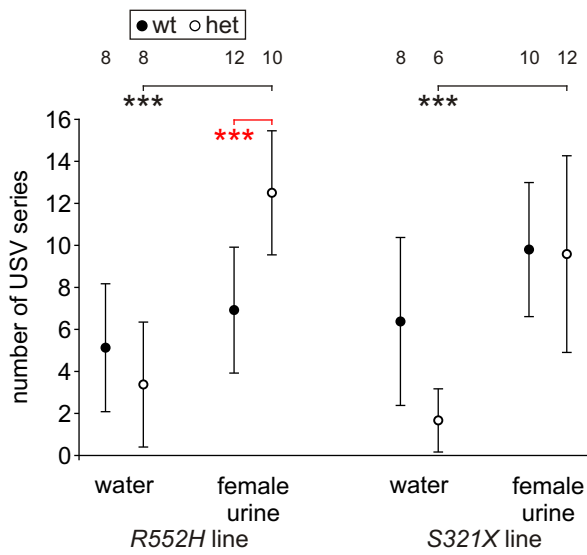


Figure S5: Number of USV series

The average numbers of USV series (mean +/- standard deviation) emitted during the first minute of stimulus presence in experiment 1 (water) and experiment 2 (urine) are shown for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line. In both het groups significantly more USV series occurred in response to urine than in response to water. For further explanations see figure 1.

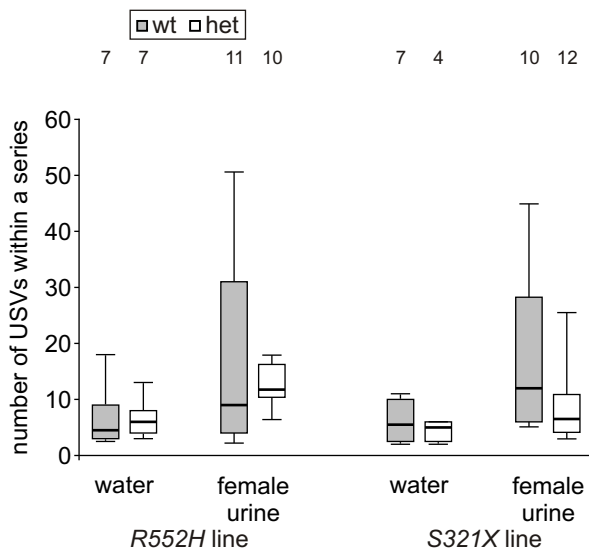


Figure S6: Number of USVs in a USV series

The average numbers of USVs in a USV series are shown as boxplots (median, quartiles, range) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. The het group of the *R552H*-line produced significantly more USVs in series to female urine than to water. For further explanations see figures 1, S1.

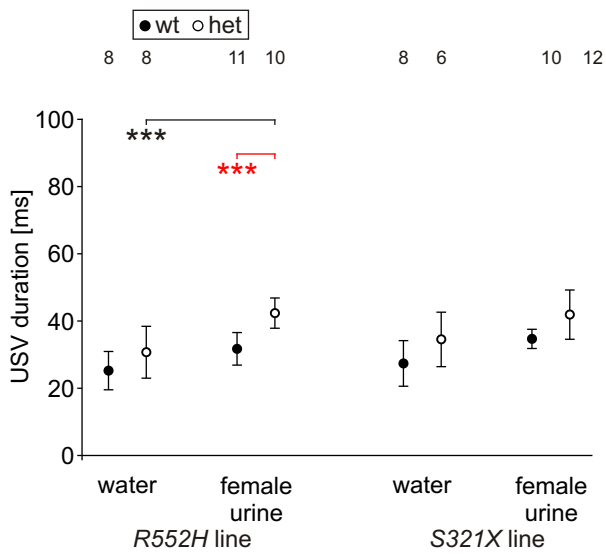


Figure S7: Duration of USVs

The average durations of USVs (mean +/- standard deviation) are shown for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine led to longer USVs than water in the *R552H* het group. The hets of this line produced significantly longer USVs in response to female urine than the wts of the same line. For further explanations see figure 1.

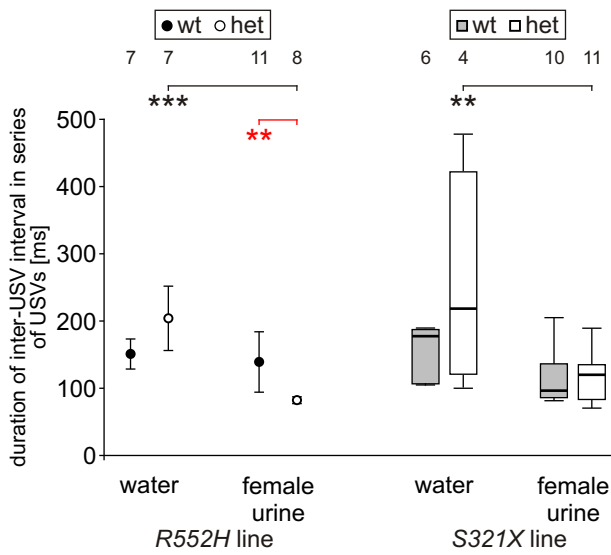


Figure S8: Duration of inter-USV intervals in series of USVs

The average durations of inter-USV intervals in USV series are shown as means +/- standard deviations or as boxplots (median, quartiles, range) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. The *R552H* het group and both genotypes of the *S321X*-line produced to urine USV series with shorter inter-USV intervals than in response to water. For further explanations see figures 1, S1.

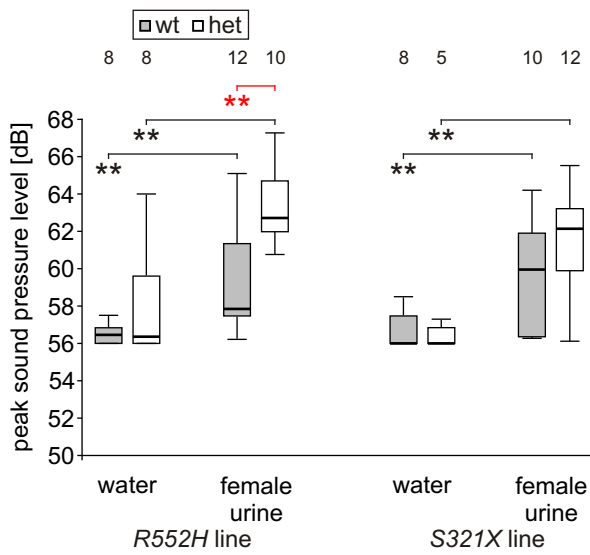


Figure S9: Peak sound pressure level (dB SPL) of USVs

The average peak SPLs of USVs are shown as boxplots (median, quartiles, range) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine led to significantly louder USVs than water in each genotype group. Statistical comparisons had Bonferroni adjustment. For further explanations see figures 1, S1.

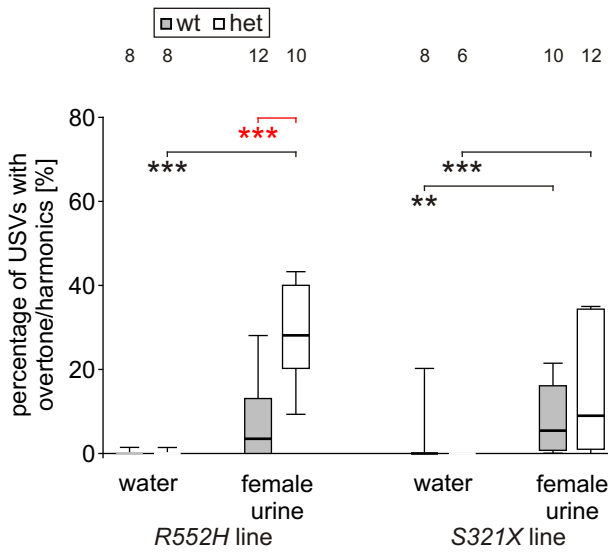


Figure S10: Percentage of USVs with overtones or harmonics

The average percentages of USVs with overtones or harmonics are shown as boxplots (median, quartiles, range) for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine led to significantly more USVs with overtone/harmonics than water in both het groups of the *Foxp2* mouse lines. Statistical comparisons had Bonferroni adjustment. For further explanations see figures 1, S1.

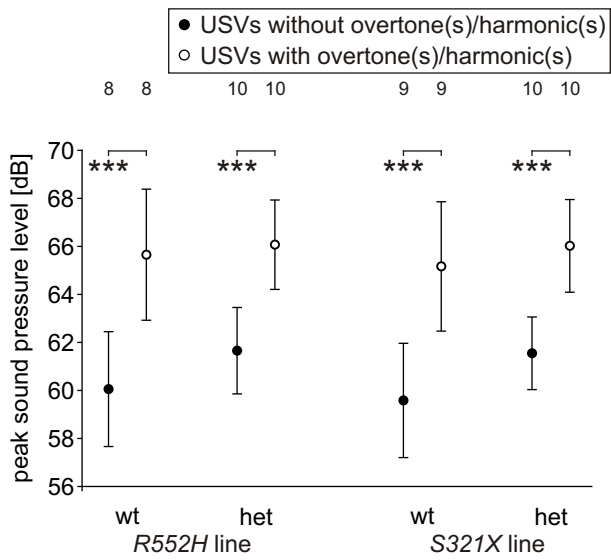


Figure S11: Peak sound pressure level (dB SPL) of USVs without and with overtone/harmonics

The average peak SPLs of USVs (mean +/- standard deviation) in experiment 2 (female urine) are shown for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line separately for USVs without or with overtone/harmonic(s). In all genotypes, USVs with overtones or harmonics were about 5 dB louder than USVs without overtone or harmonics. For further explanations see figure 1.

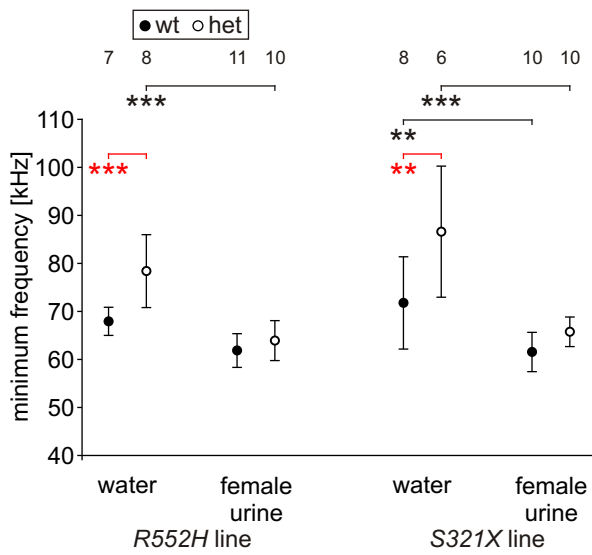


Figure S12: Minimum frequency of USVs

The average minimum frequencies of USVs (mean +/- standard deviation) are shown for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine led to significantly lower minimum frequencies than water. For further explanations see figure 1.

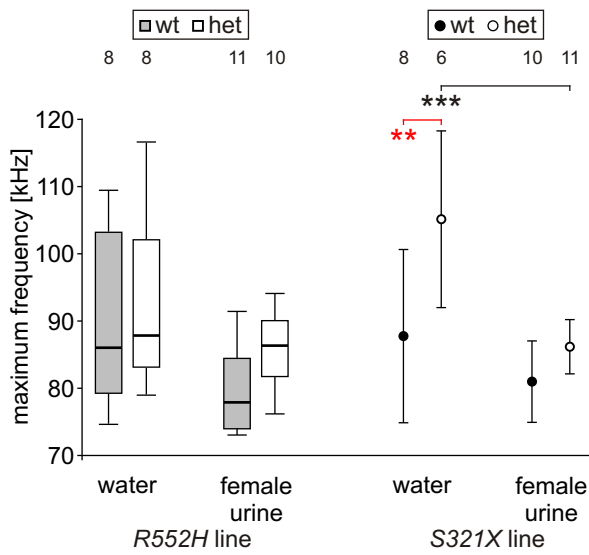


Figure S13: Maximum frequency of USVs

The average maximum frequencies of USVs are shown as means +/- standard deviation or as boxplots (median, quartiles, range) wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the indicated experimental situations. Female urine led to lower maximum frequencies than water in the wt group of *R552H*-line and in both groups of the *S321X*-line. For further explanations see figures 1, S1.

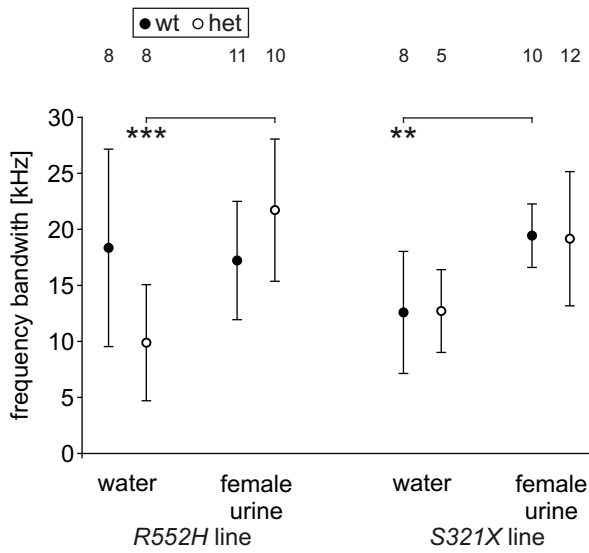


Figure S14: Frequency bandwidth of USVs

The average frequency bandwidths (maximum minus minimum frequency) of USVs (mean +/- standard deviation) are shown for wild-types (wt) and heterozygotes (het) of the *R552H*- and *S321X*-line and the experiments 1 (water) and 2 (female urine). Female urine led to larger frequency bandwidths than water in the het group of *R552H*-line and in both groups of the *S321X*-line. For further explanations see figure 1.