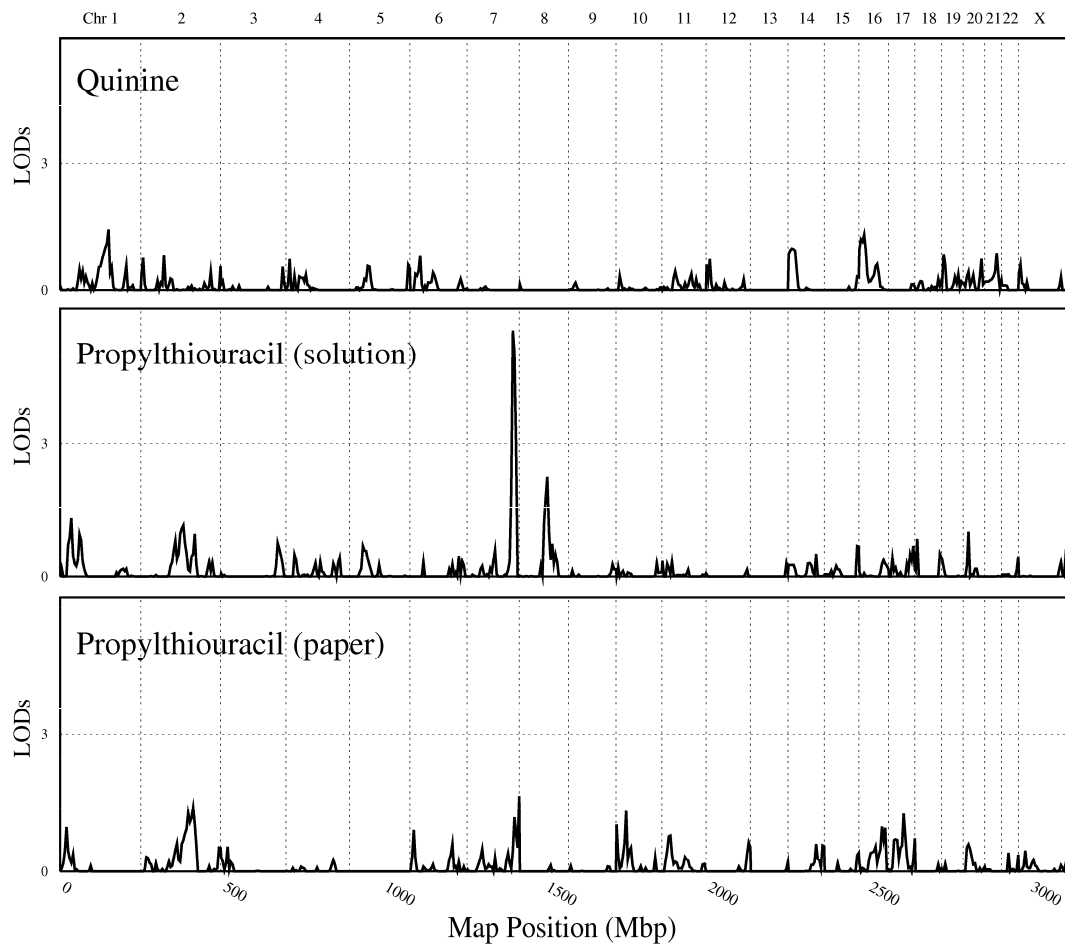


**Supplemental Table 1. Top 12 SNPs associated with ratings of quinine and PROP (solution, paper) taste intensity**

Stimulus	SNP	Chr	Location(bp)	p-Value	MAF	Gene	Allele	Type
Quinine	rs10772420	12	11065543	2.0E-15	0.48	TAS2R19*	R299C	Gen
	rs2010481	12	11071607	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Gen
	rs10772418	12	11062010	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs10845293	12	11074522	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs2900578	12	11071471	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs4763616	12	11076503	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs7134036	12	11076851	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs7953498	12	11073683	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs2060705	12	11080443	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs2443097	12	11098963	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs2597996	12	11099651	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
	rs7955495	12	11204940	2.0E-15	0.48	<i>PRR4</i> and <i>PRH1</i>	Intronic	Imp
PROP solution	rs713598	7	141319814	1.6E-104	0.40	TAS2R38		Imp
	rs10246939	7	141319073	9.7E-102	0.44	TAS2R38	I296V†	Gen
	rs1726866	7	141319174	5.6E-101	0.44	TAS2R38	A262V†	Gen
	rs7794708	7	141300106	1.6E-46	0.29	Intergenic		Gen
	rs1285950	7	141283032	1.6E-46	0.29	Intergenic		Imp
	rs1285944	7	141286444	1.6E-46	0.29	Intergenic		Imp
	rs1285968	7	141293491	1.6E-46	0.29	Intergenic		Imp
	rs1726867	7	141307169	4.7E-43	0.30	Intergenic		Imp
	rs10464444	7	141178656	4.4E-42	0.29	Intergenic		Imp
	rs9640357	7	141189567	4.4E-42	0.29	Intergenic		Imp
	rs11765575	7	141184437	4.4E-42	0.29	<i>LOC136242</i>	Intronic	Imp
	rs2082551	7	141223655	1.5E-41	0.29	Intergenic		Gen
PROP paper	rs10246939	7	141319073	1.5E-42	0.44	TAS2R38	I296V†	Gen
	rs713598	7	141319814	2.2E-42	0.40	TAS2R38		Imp
	rs1726866	7	141319174	2.5E-42	0.44	TAS2R38	A262V†	Gen
	rs7794708	7	141300106	2.2E-24	0.29	Intergenic		Gen
	rs1285950	7	141283032	2.2E-24	0.29	Intergenic		Imp
	rs1285944	7	141286444	2.2E-24	0.29	Intergenic		Imp
	rs1285968	7	141293491	2.2E-24	0.29	Intergenic		Imp
	rs1726867	7	141307169	5.1E-21	0.30	Intergenic		Imp
	rs10464444	7	141178656	4.3E-20	0.29	Intergenic		Imp
	rs9640357	7	141189567	4.3E-20	0.29	Intergenic		Imp
	rs11765575	7	141184437	4.3E-20	0.29	<i>LOC136242</i>	Intronic	Imp
	rs2163953	7	141214038	6.4E-20	0.29	Intergenic		Gen

Chr=Chromosome; MAF= Minor Allele Frequency. Type, Gen=genotyped, Imp=imputed; Intergenic=marker falls between genes as annotated in Build 37.1. \*TAS2R19 has several gene symbol

aliases. †Alleles with reduced function in response to PROP in cell-based assays(6). §There are several alleles at this location: P119T, P119A, and P119S.



**Supplemental Figure 1.** Family based linkage for three taste traits. Linkage analyses for ratings of quinine bitterness (top), propylthiouracil in solution (middle) and propylthiouracil saturated paper (bottom) by dizygotic twin and sibling pairs. The peak on chromosome 7 is near the *TAS2R38* gene (middle panel). LOD=logarithm of odds. Chromosomes are denoted by vertical dotted lines (top); the horizontal dotted lines represent the criterion for genome-wide significance (LOD=3). Labels on the X-axis denote human genome map position in megabases (Mbs). For other details of the analysis, see text.