

**Supplemental Table 1** Differential Gene Expression in Oral Warts Compared to Normal Mucosa

Gene	Median Ct Mucosa <sup>1</sup>	Confidence Interval Mucosa	Median Ct Oral Warts <sup>1</sup>	Confidence Interval Oral Warts	Delta Median Ct <sup>2</sup>
<i>Chemokine Receptors</i>					
CCR1	30.16	27.0 – 33.7	34.07	29.9 – 38.8	-3.91
CCR2	27.81	24.9 – 31.1	30.86	27.1 – 35.1	-3.05
<b>CCR3</b>	39.66	35.5 – 40.0	32.34	28.4 – 36.8	<b>7.32</b>
CCR5	25.63	22.9 – 28.7	28.77	25.3 – 32.7	-3.14
CCR6	26.33	23.6 – 29.4	31.11	27.3 – 35.4	-4.78
CCR7	24.74	22.1 – 27.7	26.18	23.0 – 29.8	-1.45
CCR8	37.40	33.4 – 40.0	34.55	30.4 – 39.3	2.85
<b>CCRL2</b>	36.34	32.5 – 40.0	25.27	22.2 – 28.7	<b>11.08</b>
CXCR3	27.59	24.7 – 30.8	27.94	24.6 – 31.8	-0.36
CXCR4	21.95	19.6 – 24.5	21.75	19.1 – 24.7	0.20
CXCR5	32.76	29.3 – 36.6	30.96	27.2 – 35.2	1.80
<b>IL8R<math>\alpha</math></b>	32.38	29.0 – 36.2	23.81	20.9 – 27.1	<b>8.57</b>
IL8R $\beta$	18.03	16.1 – 20.2	19.25	16.9 – 21.9	-1.22
<i>Chemokines</i>					
CCL1	38.65	34.6 – 40.0	38.14	33.1 – 40.0	0.52
CCL16	40.00	35.8 – 40.0	40.00	35.1 – 40.0	0.00
CCL17	25.77	23.0 – 28.8	28.04	24.3 – 32.3	-2.26
CCL18	39.81	35.6 – 40.0	36.87	32.0 – 40.0	2.94
CCL23	40.00	35.8 – 40.0	37.66	33.1 – 40.0	2.34
CXCL13	39.13	35.0 – 40.0	40.00	35.7 – 40.0	-0.87
Eotaxin	37.77	33.8 – 40.0	37.35	32.8 – 40.0	0.42
IL8	36.04	32.2 – 40.0	31.09	27.3 – 35.4	4.95
IP10	40.00	35.8 – 40.0	37.04	32.6 – 40.0	2.96
MCP1	28.27	25.3 – 31.6	32.48	28.5 – 36.9	-4.21
MCP4	40.00	35.8 – 40.0	34.66	30.5 – 39.4	5.34
MIF	16.74	15.0 – 18.7	14.89	13.1 – 16.9	1.85
<b>MIG</b>	37.42	33.5 – 40.0	30.66	26.9 – 34.9	<b>6.76</b>
<b>MIP1<math>\alpha</math></b>	38.23	34.2 – 40.0	31.58	27.8 – 35.9	<b>6.65</b>
MIP1 $\beta$	33.00	29.5 – 36.9	34.47	30.3 – 39.2	-1.47
MIP3 $\alpha$	29.65	26.5 – 33.1	28.62	25.2 – 32.6	1.03
MIP3 $\beta$	38.21	34.2 – 40.0	34.51	30.3 – 39.3	3.70
<b>RANTES</b>	20.69	18.5 – 23.1	25.96	22.8 – 29.5	<b>-5.27</b>
S100A8	20.00	17.9 – 22.4	18.03	15.8 – 20.5	1.97
<b>S100A9</b>	11.44	10.2 – 12.8	9.01	7.9 – 10.2	<b>2.44</b>
SDF	33.34	29.8 – 37.3	37.45	32.9 – 40.0	-4.11
SLC	35.59	31.8 – 39.8	37.28	32.8 – 40.0	-1.69
<i>Cytokine/Growth Factor Receptors</i>					
CSF1R	23.16	20.7 – 25.9	24.90	21.9 – 28.3	-1.75
<b>EDG1</b>	25.70	23.0 – 28.7	30.35	26.7 – 34.5	<b>-4.65</b>
EDG2	21.96	19.6 – 24.6	25.52	22.4 – 29.0	-3.56
EDG4	21.46	19.2 – 24.0	20.20	17.8 – 23.0	1.26
EGFR	19.16	17.1 – 21.4	17.39	15.3 – 19.8	1.77
FGFR4	33.97	30.4 – 38.0	37.67	33.1 – 40.0	-3.70
IFNR	31.77	28.4 – 35.5	29.27	25.7 – 33.3	2.50
<b>IFN<math>\gamma</math>R1</b>	20.46	18.3 – 22.9	17.30	15.2 – 19.7	<b>3.16</b>
IFN $\gamma$ R2	22.37	20.0 – 25.0	21.11	18.6 – 24.0	1.26

IL1R type II	26.36	23.6 – 29.5	25.52	22.4 – 29.0	0.84
IL2R $\alpha$	31.50	28.2 – 35.2	32.04	28.2 – 36.5	-0.54
IL2R $\beta$	30.06	26.9 – 33.6	33.07	29.1 – 37.6	-3.01
IL2R $\gamma$	23.25	20.8 – 26.0	25.97	22.8 – 29.6	-2.72
IL3R $\alpha$	35.36	31.6 – 39.5	33.82	29.7 – 38.5	1.54
<b>IL4R<math>\alpha</math></b>	28.91	25.9 – 32.3	24.31	21.4 – 27.7	<b>4.60</b>
IL5R $\alpha$	40.00	35.8 – 40.0	40.00	36.2 – 40.0	0.00
IL6R $\alpha$	26.29	23.5 – 29.4	22.60	19.9 – 25.7	3.69
IL7R	23.77	21.3 – 26.6	26.20	23.0 – 29.8	-2.43
IL9R $\alpha$	35.67	31.9 – 39.9	37.73	33.2 – 40.0	-2.06
<b>IL10R<math>\alpha</math></b>	29.51	26.4 – 33.0	24.51	21.5 – 27.9	<b>5.00</b>
IL11R $\alpha$	33.59	30.0 – 37.6	31.99	28.1 – 36.4	1.60
IL12R	36.69	32.8 – 40.0	39.20	34.5 – 40.0	-2.50
IL13R $\alpha$ 1	18.98	17.0 – 21.2	17.31	15.2 – 19.7	1.67
IL13R $\alpha$ 2	40.00	35.8 – 40.0	36.99	32.5 – 40.0	3.01
IL15R $\alpha$	26.05	23.3 – 29.1	25.44	22.4 – 28.9	0.61
IL17R	27.97	25.0 – 31.3	25.54	22.5 – 29.1	2.43
IL18R	34.00	30.4 – 38.0	34.00	29.9 – 38.7	0.01
MDFA	38.61	34.5 – 40.0	36.33	31.5 – 40.0	2.28
MGFA	22.63	20.2 – 25.3	20.14	17.5 – 23.2	2.49
MGFB	22.53	20.1 – 25.2	20.05	17.4 – 23.1	2.48
TGF $\beta$ R1	20.67	18.5 – 23.1	18.75	23.3 – 30.2	1.92
TGF $\beta$ R2	26.44	23.6 – 29.6	25.03	26.0 – 33.6	1.41
TGF $\beta$ R3	21.66	19.4 – 24.2	23.92	22.0 – 28.5	-2.26
TNFR	17.90	16.0 – 20.0	15.87	13.9 – 18.1	2.03
<b>Cytokines/Growth Factors</b>					
CSF1	23.49	21.0 – 26.3	20.65	18.2 – 23.5	2.84
<b>EGF</b>	38.48	34.4 – 40.0	28.57	25.1 – 32.5	<b>9.91</b>
<b>EGR1</b>	23.84	21.3 – 26.7	17.98	15.8 – 20.5	<b>5.86</b>
ENA78	40.00	35.8 – 40.0	40.00		0.00
Endothelin 1	26.86	24.0 – 30.0	25.09	22.1 – 28.5	1.77
Endothelin 3	33.86	30.3 – 37.9	34.86	30.6 – 39.7	-0.99
<b>FGF1</b>	32.40	29.0 – 36.2	24.57	21.6 – 28.0	<b>7.82</b>
FGF6	40.00	35.8 – 40.0	40.00	35.1 – 40.0	0.00
G-CSF	34.63	31.0 – 38.7	35.16	30.9 – 40.0	-0.53
<b>GMCSF</b>	40.00	35.8 – 40.0	28.87	25.4 – 32.8	<b>11.13</b>
<b>HBEGF</b>	19.52	17.5 – 21.8	16.52	14.5 – 18.8	<b>3.00</b>
IFN $\gamma$	34.44	30.8 – 38.5	34.14	30.0 – 38.8	0.30
IK	19.04	17.0 – 21.3	17.47	15.4 – 19.9	1.56
<b>IL1<math>\alpha</math></b>	24.42	21.8 – 27.3	18.35	16.1 – 20.9	<b>6.07</b>
IL1 $\beta$	26.90	24.1 – 30.1	22.98	20.2 – 26.1	3.92
IL2	40.00	35.8 – 40.0	39.98	35.1 – 40.0	0.02
IL4	39.78	35.6 – 40.0	40.00	35.3 – 40.0	-0.22
IL5	38.53	34.5 – 40.0	40.00	35.3 – 40.0	-1.47
IL6	40.00	35.8 – 40.0	40.00	35.3 – 40.0	0.00
IL9 $\beta$	36.06	32.2 – 40.0	32.22	28.0 – 37.1	3.83
IL10	37.27	33.3 – 40.0	34.96	30.7 – 39.8	2.31
IL11	35.07	31.4 – 39.2	33.82	29.7 – 38.5	1.25
IL12 $\alpha$	26.35	23.6 – 29.5	30.67	27.0 – 34.9	-4.32
IL12 $\beta$	40.00	35.8 – 40.0	38.18	33.6 – 40.0	1.82
IL13	40.00	35.8 – 40.0	36.98	32.5 – 40.0	3.02
IL14	23.47	21.0 – 26.2	22.15	19.5 – 25.2	1.33

IL15	35.22	31.5 – 39.4	37.25	32.7 – 40.0	-2.03
<b>IL16</b>	28.17	25.2 – 31.5	23.58	20.7 – 26.8	<b>4.59</b>
IL17	38.34	34.3 – 40.0	36.67	32.2 – 40.0	1.67
IL18	22.32	20.0 – 25.0	24.30	21.4 – 27.6	-1.98
IL19	36.42	32.6 – 40.0	31.32	27.5 – 35.6	5.10
IL21	40.00	35.9 – 40.0	40.00	35.3 – 40.0	0.00
IL22	40.00	35.8 – 40.0	36.56	31.7 – 40.0	3.44
SCF	39.45	35.3 – 40.0	36.95	32.1 – 40.0	2.50
LEF1	29.33	26.2 – 32.8	26.25	23.1 – 29.9	3.08
LIF	35.43	31.7 – 39.6	34.09	30.0 – 38.8	1.34
Lymphotoxin $\beta$	28.12	25.1 – 31.4	29.08	25.6 – 33.1	-0.96
Osteopontin	40.00	35.8 – 40.0	40.00	35.3 – 40.0	0.00
TGF $\beta$ 1	30.54	27.3 – 34.1	26.54	23.3 – 30.2	4.00
TGF $\beta$ 2	32.78	29.3 – 36.7	29.54	26.0 – 33.6	3.24
TGF $\beta$ 3	29.29	26.2 – 32.7	27.11	23.8 – 30.8	2.18
TNF $\alpha$	25.22	22.6 – 28.2	22.24	19.5 – 25.3	2.98
<b>TNF<math>\beta</math></b>	32.40	29.0 – 36.2	38.28	33.7 – 40.0	<b>-5.88</b>
VEGF	17.90	16.0 – 20.0	15.23	13.4 – 17.3	2.67
<b><i>Effector Molecules</i></b>					
Anexin	12.25	11.0 – 13.7	10.58	9.3 – 12.0	1.67
Defensin $\alpha$ 1	27.58	24.7 – 30.8	31.30	27.5 – 35.6	-3.71
Defensin $\alpha$ 3	27.57	24.7 – 30.8	29.93	26.0 – 34.5	-2.36
Defensin $\alpha$ 4	32.47	29.0 – 36.3	27.70	24.0 – 31.9	4.78
Defensin $\alpha$ 5	40.00	35.8 – 40.0	39.20	34.0 – 40.0	0.80
<b>Defensin <math>\alpha</math>6</b>	40.14	35.9 – 40.0	31.32	27.2 – 36.1	<b>8.82</b>
Defensin $\beta$ 1	21.60	19.3 – 24.2	18.84	16.6 – 21.4	2.76
<b>Defensin <math>\beta</math>2</b>	22.25	19.9 – 24.9	14.67	12.7 – 16.9	<b>7.58</b>
<b>Gelatinase B</b>	32.09	28.7 – 35.9	25.21	22.2 – 28.7	<b>6.88</b>
GRANULYSIN	29.66	26.5 – 33.2	31.33	27.5 – 35.6	-1.67
GRANZYME A	27.39	24.5 – 30.6	30.98	26.9 – 35.7	-3.59
GRANZYME B	27.07	24.2 – 30.3	30.26	26.6 – 34.4	-3.18
IL1R Antagonist	17.74	15.9 – 19.8	17.94	15.8 – 20.4	-0.20
Interferon regulatory factor 1	23.46	21.0 – 26.2	23.81	20.9 – 27.1	-0.35
Myeloperoxidase	40.00	35.8 – 40.0	40.00	35.3 – 40.0	0.00
NOS2A	40.00	35.8 – 40.0	34.54	30.0 – 39.8	5.46
Perforin	29.24	26.1 – 32.7	32.60	28.7 – 37.1	-3.36
PMN elastase	40.00	35.8 – 40.0	32.85	28.9 – 37.4	<b>7.15</b>
SLP 1	11.88	10.6 – 13.3	10.07	8.8 – 11.5	1.81
TRAIL	20.14	18.0 – 22.5	18.96	16.7 – 21.6	1.18
<b><i>Surface Markers</i></b>					
CD1 $\alpha$	28.20	25.2 – 31.5	26.53	23.3 – 30.2	1.67
<b>CD3<math>\gamma</math></b>	23.59	21.1 – 26.4	32.33	28.4 – 36.8	<b>-8.75</b>
CD4	27.01	24.2 – 30.2	26.20	23.0 – 29.8	0.80
CD8	28.99	25.9 – 32.4	31.93	28.1 – 36.3	-2.94
CD14	24.39	21.8 – 27.3	26.44	23.2 – 30.1	-2.06
CD16	37.31	33.4 – 40.0	31.87	28.0 – 36.3	5.45
CD19	40.00	35.8 – 40.0	35.72	31.4 – 40.0	4.28
CD23	40.00	35.8 – 40.0	40.00	35.3 – 40.0	0.00
CD27L	35.43	31.7 – 39.6	30.47	26.8 – 34.7	4.96
CD34	31.20	276.9 – 34.9	31.76	27.6 – 36.6	-0.56
CD40L	36.14	32.3 – 40.0	31.79	27.9 – 36.2	4.35
CD44	18.98	17.0 – 21.2	17.52	15.4 – 19.9	1.46

CD56	38.15	34.1 – 40.0	37.75	33.2 – 40.0	0.39
CD62 E	40.00	35.8 – 40.0	37.82	33.2 – 40.0	2.18
CD62 L	37.09	33.2 – 40.0	34.52	30.3 – 39.3	2.57
<b>CD62 P</b>	40.00	35.8 – 40.0	31.95	28.1 – 36.4	<b>8.05</b>
CD69	35.13	31.4 – 39.3	33.08	29.1 – 37.6	2.05
<b>CD79<math>\alpha</math></b>	36.03	32.2 – 40.0	24.47	20.9 – 28.7	<b>11.55</b>
CD80	34.14	30.5 – 38.2	31.78	27.9 – 36.2	2.36
CD86	27.88	24.9 – 31.2	24.88	21.9 – 28.3	2.99
FC $\epsilon$ RI	17.71	15.8 – 19.8	17.89	15.7 – 20.4	-0.18
Hevin	29.16	26.1 – 32.6	25.85	22.7 – 29.4	3.30
ICAM1	28.67	25.6 – 32.1	28.56	25.1 – 32.5	0.10
ICAM2	30.77	27.5 – 34.4	35.58	31.3 – 40.0	-4.81
ICAM3	24.77	22.1 – 27.7	27.42	24.1 – 32.2	-2.65
KIT	37.26	33.3 – 40.0	38.55	33.5 – 40.0	-1.29
PECAM1	26.82	24.0 – 30.0	30.07	26.4 – 34.2	-3.25
TCR $\alpha$	30.87	27.6 – 34.5	33.23	29.2 – 37.8	-2.36
<b>TCR<math>\beta</math></b>	20.60	18.4 – 23.0	25.51	22.4 – 29.0	<b>-4.91</b>
TCR $\delta$	35.88	32.1 – 40.0	37.45	32.9 – 40.0	-1.57
THY1	33.87	30.3 – 37.9	33.54	29.5 – 38.2	0.33
VCAM1	34.79	31.1 – 38.9	37.14	32.6 – 40.0	-2.35
VLA4	26.40	23.6 – 29.5	25.82	22.7 – 29.4	0.58

<sup>2</sup>Median Ct values are derived by “back-transformation” of mean logCt values <sup>1</sup>

<sup>3</sup>Median Ct values from normal mucosa were subtracted from Median Ct values of oral warts. Positive values indicate increased expression and negative values reduced expression in oral warts compared to control mucosa. Significant differences ( $p < 0.05$ ) indicated in bold.

## Reference

1. Bland, J.M. & Altman, D.G. Transformation, means, and confidence intervals. *British Medical Journal* **312**, 1079 (1996).