

**Table W1.** List of Applied Biosystems Assays Used.

Common Gene Name	AB Gene Designation
<i>β-catenin</i>	CTNNB1-Hs00355049_m1
<i>Carbonic Anhydrase 1</i>	CA1-Hs00266139_m1
<i>CDX1</i>	CDX1-Hs00156451_m1
<i>CDX2</i>	CDX2-Hs00230919_m1
<i>Cox2</i>	PTGS2-Hs01573471_m1
<i>Cyclin D1</i>	CCND1-Hs00277039_m1
<i>DRA</i>	SLC26A3-Hs00230798_m1
<i>FILAGGRIN</i>	FLG-Hs00863478_g1
<i>HATH1/ATOH1</i>	ATOH1-Hs00245453_s1
<i>HES1</i>	HES1-Hs00172878_m1
<i>Involucrin</i>	IVL-Hs00846307_s1
<i>KRT1</i>	KRT1-Hs00196158_m1
<i>KRT10</i>	KRT10-Hs00166289_m1
<i>KRT13</i>	KRT13-Hs00999762_m1
<i>KRT14</i>	KRT14-Hs00265033_m1
<i>KRT15</i>	KRT15-Hs00267035_m1
<i>KRT16</i>	KRT16-Hs00373910_g1
<i>KRT17</i>	KRT17-Hs01588578_m1
<i>KRT18</i>	KRT18-Hs01653110_s1
<i>KRT19</i>	KRT19-Hs00761767_s1
<i>KRT20</i>	KRT20-Hs00300643_m1
<i>KRT4</i>	KRT4-Hs00361611_m1
<i>KRT5</i>	KRT5-Hs00361185_m1
<i>KRT7</i>	KRT7-Hs0059840_m1
<i>KRT72</i>	KRT72-Hs00603237_m1
<i>KRT8</i>	KRT8-Hs01670053_m1
<i>LORICRIN</i>	LOR-Hs01894962_s1
<i>MUC1</i>	MUC1-Hs00159357_m1
<i>MUC12</i>	MUC12-Hs00419779_m1
<i>MUC13</i>	MUC13-Hs00217230_m1
<i>MUC15</i>	MUC15-Hs00377336_m1
<i>MUC16</i>	MUC16-Hs01065189_m1
<i>MUC17</i>	MUC17-Hs00959753_s1
<i>MUC2</i>	MUC2-Hs03005094_m1
<i>MUC3A/3B</i>	MUC3B;MUC3A-Hs03649367_mH
<i>MUC4</i>	MUC4-Hs00366414_m1
<i>MUC5AC</i>	MUC5AC-Hs01370716_m1
<i>MUC5B</i>	MUC5B-Hs00861588_m1
<i>MUC6</i>	MUC6-Hs00401231_m1
<i>NHE2</i>	SLC9A2-Hs00268166_m1
<i>NOTCH1</i>	NOTCH1-Hs01062014_m1
<i>p63</i>	TP63-Hs00978340_m1
<i>RETNLB</i>	RETNLB-Hs00395669_m1
<i>Sucrase Isomaltase</i>	SI-Hs00356112_m1
<i>Villin</i>	VIL1-Hs00200229_m1

**Table W2.** Screening Comparison of Gene Expression between OTSTR.L and OTSTR.L.CatCLeF Cells by Applied Systems Quantitative PCR Array.

Gene Name	Fold Change EPC.CatCLeF
<i>β-catenin</i>	93.65
<i>KRT13</i>	43.56
<i>KRT4</i>	19.44
<i>KRT15</i>	12.07
<i>NHE2</i>	7.32
<i>KRT19</i>	5.96
<i>MUC4</i>	5.23
<i>KRT7</i>	4.96
<i>KRT10</i>	4.45
<i>NOTCH1</i>	4.35
<i>Cyclin D1</i>	3.77
<i>MUC5B</i>	3.35
<i>HES1</i>	3.26
<i>MUC1</i>	2.68
<i>Cox2</i>	1.98
<i>Villin</i>	1.96
<i>MUC16</i>	1.95
<i>KRT18</i>	1.54
<i>KRT1</i>	1.51
<i>KRT5</i>	1.37
<i>KRT8</i>	1.34
<i>MUC3A/3B</i>	1.21
<i>DRA</i>	1.21
<i>MUC12</i>	1.21
<i>MUC2</i>	1.21
<i>MUC5AC</i>	1.21
<i>MUC6</i>	1.21
<i>RETNLB</i>	1.21
<i>Sucrase Isomaltase</i>	1.21
<i>CDX2</i>	1.21
<i>KRT17</i>	1.20
<i>KRT16</i>	1.16
<i>p63</i>	1.10
<i>HATH1/ATOH1</i>	1.07
<i>Carbonic Anhydrase 1</i>	1.01
<i>Involucrin</i>	-1.03
<i>KRT14</i>	-1.14
<i>KRT72</i>	-1.15
<i>KRT20</i>	-1.26
<i>MUC17</i>	-1.47
<i>CDX1</i>	-2.22
<i>MUC15</i>	-2.96
<i>MUC13</i>	-6.06
<i>FILAGGRIN</i>	-10.13
<i>LORICRIN</i>	-37.22

Shaded data indicate genes that are two-fold different from controls.

**Table W3.** Screening Comparison of Gene Expression between OTSTR.M and OTSTR.M.Cox2 Cells by Applied Systems Quantitative PCR Array.

Gene Name	Fold Change EPC.COX2
<i>MUC17</i>	28.48
<i>Cox2</i>	28.31
<i>HATH1/ATO1</i>	13.43
<i>MUC1</i>	11.07
<i>MUC5B</i>	9.41
<i>MUC3A/3B</i>	5.49
<i>KRT7</i>	4.08
<i>KRT19</i>	2.05
<i>β-catenin</i>	1.81
<i>Cyclin D1</i>	1.55
<i>Villin</i>	1.37
<i>DRA</i>	1.37
<i>MUC12</i>	1.37
<i>MUC2</i>	1.37
<i>MUC5AC</i>	1.37
<i>MUC6</i>	1.37
<i>RETNLB</i>	1.37
<i>Sucrase isomaltase</i>	1.37
<i>KRT8</i>	1.32
<i>HES1</i>	1.29
<i>p63</i>	1.28
<i>Involucrin</i>	1.16
<i>NOTCH1</i>	1.15
<i>KRT72</i>	1.06
<i>KRT16</i>	-1.14
<i>MUC16</i>	-1.18
<i>KRT18</i>	-1.20
<i>KRT15</i>	-1.33
<i>MUC13</i>	-1.59
<i>KRT17</i>	-1.61
<i>KRT20</i>	-1.76
<i>CDX1</i>	-1.98
<i>CDX2</i>	-2.03
<i>KRT4</i>	-2.15
<i>KRT5</i>	-3.41
<i>MUC15</i>	-4.78
<i>FILAGGRIN</i>	-4.80
<i>Carbonic Anhydrase 1</i>	-5.17
<i>KRT14</i>	-5.31
<i>KRT13</i>	-6.00
<i>MUC4</i>	-8.00
<i>NHE2</i>	-9.07
<i>KRT10</i>	-12.98
<i>LORICRIN</i>	-13.23
<i>KRT1</i>	-15.38

Shaded data indicate genes that are two-fold different from controls.