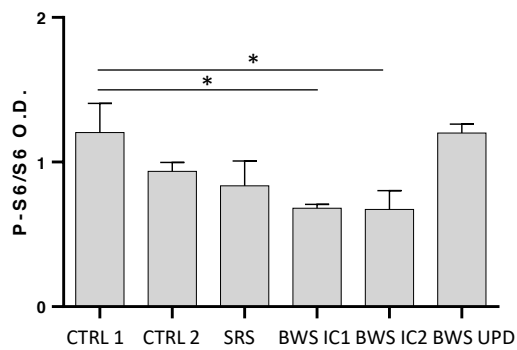
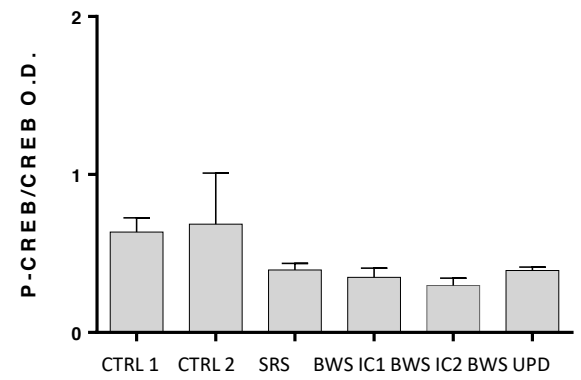
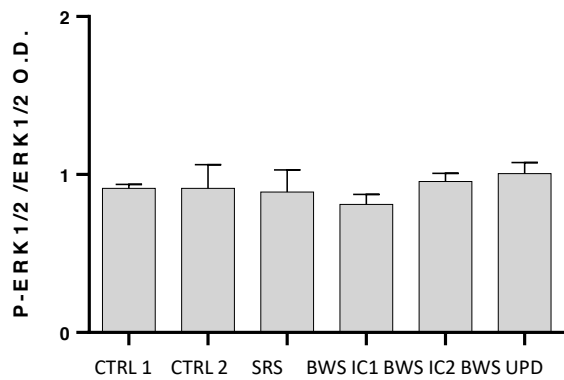
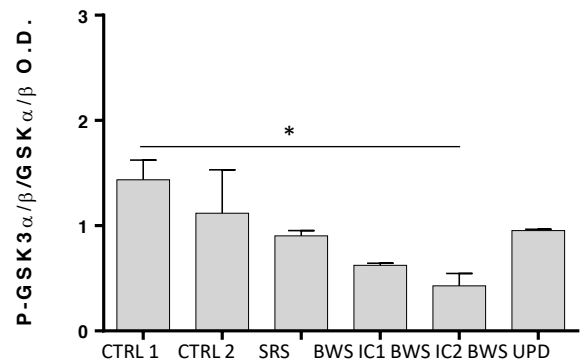
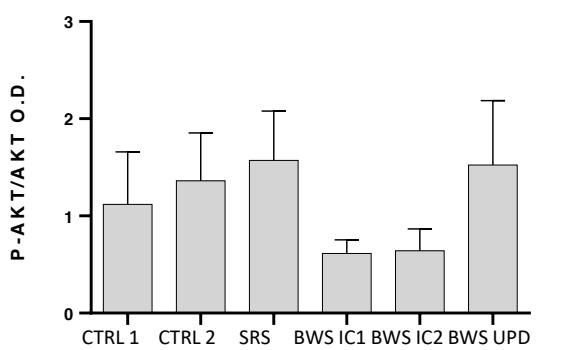


Supplemental Figure S1. Analysis of the phosphorylation pattern of components of the PI3K and MAPK pathways by PathScan EGFR signaling antibody array Kit in BWS IC2 and CTRL LCLs. Phosphorylation of MEK1/2 (Ser221) and MEK1/2 (Ser217/221) are highlighted in blue and green, respectively. Phosphorylation of Akt (Thr308) and Akt (Ser473) are highlighted in yellow and orange, respectively.



Supplemental Figure S2. Relative intensity (Optical density: O.D.) by densitometric analysis was evaluated and expressed as ratio of phospho/total proteins. Data represent the mean \pm SEM of 3 experiments (two way-ANOVA, $* < 0.05$)

Table S1. Panel of genes of the WNT pathway analyzed by nCounter approach

GENE	Accession	Log2 fold change	P-value	BH.p.value	Pathway annotation
<i>TP53</i>	NM_000546.2	0.632	2.81e-05	0.00446	KEGG WNT Annotation
<i>PLAUR</i>	NM_001005376.1	-2.16	0.000288	0.0229	Proteolysis
<i>CUL1</i>	NM_003592.2	0.196	0.000798	0.0377	KEGG WNT Annotation
<i>PRKCB</i>	NM_212535.1	-1.23	0.00102	0.0377	KEGG WNT Annotation
<i>FRAT1</i>	NM_005479.3	1.83	0.00146	0.0377	Canonical Wnt Pathway, KEGG WNT Annotation
<i>AXIN1</i>	NM_181050.1	0.265	0.00149	0.0377	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>MAPK9</i>	NM_139068.2	0.51	0.00166	0.0377	KEGG WNT Annotation
<i>CEBPD</i>	NM_005195.3	1.58	0.0027	0.0481	Transcription Factors
<i>DKK4</i>	NM_014420.2	-1.2	0.00272	0.0481	KEGG WNT Annotation
<i>MAPK10</i>	NM_002753.2	-6.57	0.00526	0.079	KEGG WNT Annotation
<i>CREBBP</i>	NM_001079846.1	0.547	0.00573	0.079	KEGG WNT Annotation
<i>PITX2</i>	NM_000325.5	3.94	0.00649	0.079	Transcription Factors, WNT Signaling Target Genes
<i>RBX1</i>	NM_014248.2	-0.521	0.00682	0.079	KEGG WNT Annotation
<i>MMP9</i>	NM_004994.2	2.09	0.00722	0.079	Calcium Binding and Signaling, Development & Differentiation, Migration, Proteolysis
<i>FBXW11</i>	NM_033645.2	0.313	0.00745	0.079	KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>WNT10A</i>	NM_025216.2	-2.25	0.00837	0.0832	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>GSK3A</i>	NM_019884.2	0.167	0.0168	0.157	Canonical Wnt Pathway

<i>GDNF</i>	NM_000514.2	-4.12	0.0222	0.185	Development & Differentiation, Migration
<i>SMAD2</i>	NM_005901.5	0.278	0.0268	0.206	EMTMetastasis, KEGG WNT Annotation
<i>SMAD4</i>	NM_005359.3	0.374	0.0272	0.206	KEGG WNT Annotation
<i>ERBB2</i>	NM_001005862.1	-0.679	0.0319	0.222	EMTMetastasis
<i>PKN1</i>	NM_213560.1	0.357	0.0322	0.222	EMTMetastasis
<i>PTGS2</i>	NM_000963.1	-2.07	0.0335	0.222	Calcium Binding and Signaling, Cell Cycle
<i>CXCL12</i>	NM_000609.5	-3.36	0.0367	0.226	EMTMetastasis
<i>BMP4</i>	NM_001202.3	0.757	0.0372	0.226	Development & Differentiation
<i>T</i>	NM_003181.2	4.22	0.0383	0.226	Development & Differentiation, Transcription Factors
<i>BAMBI</i>	NM_012342.2	3.2	0.0408	0.226	Canonical Wnt Pathway
<i>CCND1</i>	NM_053056.2	-2.39	0.0425	0.226	Calcium Binding and Signaling, Cell Cycle, Development & Differentiation, KEGG WNT Annotation, WNT Signaling Negative Regulation, WNT Signaling Target Genes
<i>FZD2</i>	NM_001466.2	-2.36	0.0426	0.226	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>PRKACA</i>	NM_002730.3	-0.319	0.0519	0.252	KEGG WNT Annotation
<i>FOXN1</i>	NM_003593.2	-3.47	0.055	0.252	Development & Differentiation
<i>TCF7L1</i>	NM_031283.1	-1.11	0.0575	0.252	Canonical Wnt Pathway, KEGG WNT Annotation, Transcription Factors
<i>TBL1XR1</i>	NM_024665.4	0.332	0.061	0.252	KEGG WNT Annotation
<i>ETS2</i>	NM_005239.4	0.771	0.0618	0.252	Transcription Factors
<i>WNT10B</i>	NM_003394.2	-1.67	0.0627	0.252	KEGG WNT Annotation
<i>MYC</i>	NM_002467.3	0.568	0.0639	0.252	Cell Cycle, KEGG WNT Annotation, Transcription Factors, WNT Signaling Target Genes

<i>WNT2</i>	NM_003391.2	-1.47	0.0647	0.252	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>FZD1</i>	NM_003505.1	1.58	0.0668	0.252	Canonical Wnt Pathway, KEGG WNT Annotation
<i>ZEB1</i>	NM_001128128.1	0.351	0.0673	0.252	EMTMetastasis
<i>SOX2</i>	NM_003106.2	-2.25	0.0691	0.252	Cell Cycle, Development & Differentiation, Transcription Factors
<i>POU5F1</i>	NM_002701.4	-0.589	0.0704	0.252	Development & Differentiation, Transcription Factors
<i>FN1</i>	NM_212482.1	-2.03	0.0706	0.252	Development & Differentiation, Migration
<i>FZD3</i>	NM_017412.2	-1.04	0.0713	0.252	Canonical Wnt Pathway, KEGG WNT Annotation
<i>FZD8</i>	NM_031866.1	-3.06	0.0742	0.256	Canonical Wnt Pathway, KEGG WNT Annotation
<i>TIMP1</i>	NM_003254.2	-1.19	0.0766	0.259	EMTMetastasis
<i>SERPINE1</i>	NM_001165413.1	-2.58	0.0809	0.268	EMTMetastasis
<i>PDGFRA</i>	NM_006206.3	-1.69	0.0855	0.278	Development & Differentiation, Migration
<i>APC</i>	NM_000038.3	0.293	0.0896	0.28	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>RUVBL1</i>	NM_003707.2	-0.333	0.0908	0.28	Canonical Wnt Pathway, KEGG WNT Annotation
<i>RUNX2</i>	NM_004348.3	-0.691	0.0945	0.284	Development & Differentiation, Transcription Factors
<i>TCF4</i>	NM_003199.1	0.362	0.105	0.309	Transcription Factors
<i>LEF1</i>	NM_016269.3	1.58	0.11	0.316	Canonical Wnt Pathway, KEGG WNT Annotation, Transcription Factors
<i>CSNK1A1</i>	NM_001892.4	0.219	0.111	0.316	Canonical Wnt Pathway, KEGG WNT Annotation
<i>SOX9</i>	NM_000346.2	0.811	0.119	0.326	Adhesion, Development & Differentiation, Transcription Factors
<i>DVL1</i>	NM_004421.2	0.306	0.127	0.339	Canonical Wnt Pathway, KEGG WNT Annotation, Planar Cell Polarity (PCP)
<i>SMAD3</i>	NM_005902.3	0.887	0.132	0.34	KEGG WNT Annotation

<i>NRP1</i>	NM_003873.5	-4.33	0.134	0.34	Development & Differentiation, Migration
<i>PORCN</i>	NM_022825.2	0.22	0.135	0.34	Canonical Wnt Pathway, KEGG WNT Annotation
<i>DVL2</i>	NM_004422.2	0.229	0.137	0.34	Canonical Wnt Pathway, KEGG WNT Annotation, Planar Cell Polarity (PCP)
<i>AXIN2</i>	NM_004655.3	2	0.14	0.343	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation, WNT Signaling Target Genes
<i>PRKACB</i>	NM_182948.2	0.836	0.143	0.345	KEGG WNT Annotation
<i>SNAI2</i>	NM_003068.3	-2.53	0.145	0.345	EMTMetastasis
<i>PPP3CB</i>	NM_001142354.1	-0.129	0.15	0.351	KEGG WNT Annotation
<i>KREMEN1</i>	NM_001039570.1	-1.67	0.157	0.351	WNT Signaling Negative Regulation
<i>SFRP1</i>	NM_003012.3	-1.58	0.159	0.351	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>CTNNB1</i>	NM_001098210.1	0.221	0.159	0.351	Canonical Wnt Pathway, KEGG WNT Annotation
<i>DAB2</i>	NM_001343.2	-2.05	0.16	0.351	Development & Differentiation, WNT Signaling Target Genes
<i>WNT11</i>	NM_004626.2	2.15	0.163	0.351	Calcium Binding and Signaling, KEGG WNT Annotation
<i>NLK</i>	NM_016231.2	0.267	0.164	0.351	KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>RAC1</i>	NM_198829.1	0.213	0.168	0.351	KEGG WNT Annotation
<i>CDKN2A</i>	NM_000077.3	0.552	0.168	0.351	Cell Cycle, Development & Differentiation, Transcription Factors
<i>CXXC4</i>	NM_025212.1	-0.783	0.172	0.355	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>KLF5</i>	NM_001730.3	1.01	0.195	0.392	Transcription Factors
<i>PRKCG</i>	NM_002739.3	-0.992	0.198	0.394	KEGG WNT Annotation
<i>NANOG</i>	NM_024865.2	-0.367	0.206	0.404	Development & Differentiation, Transcription Factors
<i>IRS1</i>	NM_005544.2	0.815	0.212	0.41	Migration

<i>SKP1</i>	NM_170679.2	-0.09	0.217	0.413	KEGG WNT Annotation
<i>PPP3CA</i>	NM_000944.4	0.758	0.218	0.413	KEGG WNT Annotation
<i>RAC3</i>	NM_005052.2	0.337	0.221	0.413	KEGG WNT Annotation
<i>WNT4</i>	NM_030761.3	-1.03	0.224	0.414	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>JUN</i>	NM_002228.3	0.501	0.233	0.421	KEGG WNT Annotation, WNT Signaling Target Genes
<i>TGFB3</i>	NM_003239.2	0.398	0.254	0.455	Development & Differentiation
<i>CCND3</i>	NM_001760.2	0.342	0.279	0.493	KEGG WNT Annotation
<i>MMP7</i>	NM_002423.3	-1.71	0.293	0.502	Calcium Binding and Signaling, KEGG WNT Annotation, Proteolysis, WNT Signaling Target Genes
<i>SIX1</i>	NM_005982.3	-1.61	0.294	0.502	Development & Differentiation, Migration, Transcription Factors
<i>PPARD</i>	NM_006238.3	-0.146	0.299	0.506	Development & Differentiation, KEGG WNT Annotation, Migration, Transcription Factors, WNT Signaling Target Genes
<i>FZD6</i>	NM_003506.2	0.818	0.315	0.527	Canonical Wnt Pathway, KEGG WNT Annotation
<i>IL6</i>	NM_000600.1	-1.1	0.328	0.543	Development & Differentiation, Migration
<i>VEGFA</i>	NM_001025366.1	0.954	0.355	0.578	Development & Differentiation, Migration
<i>AES</i>	NM_001130.5	0.126	0.357	0.578	Canonical Wnt Pathway
<i>WNT5A</i>	NM_003392.3	-1	0.368	0.586	Calcium Binding and Signaling, KEGG WNT Annotation
<i>WNT6</i>	NM_006522.3	1.23	0.368	0.586	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>BIRC5</i>	NM_001168.2	-0.393	0.376	0.587	Cell Cycle
<i>CDH11</i>	NM_001797.2	-1.44	0.377	0.587	EMTMetastasis

<i>WNT7B</i>	NM_058238.1	0.836	0.394	0.609	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>NRCAM</i>	NM_005010.4	-0.83	0.405	0.62	Adhesion, Development & Differentiation, Migration
<i>NKD1</i>	NM_033119.3	-0.322	0.419	0.635	Canonical Wnt Pathway, KEGG WNT Annotation, Planar Cell Polarity (PCP), WNT Signaling Negative Regulation
<i>FBXW4</i>	NM_022039.3	-0.154	0.449	0.667	WNT Signaling Negative Regulation
<i>CSNK2A1</i>	NM_177559.2	0.0641	0.453	0.667	Canonical Wnt Pathway, KEGG WNT Annotation
<i>FZD5</i>	NM_003468.2	0.582	0.47	0.683	Canonical Wnt Pathway, KEGG WNT Annotation
<i>LRP5</i>	NM_002335.1	0.302	0.472	0.683	Canonical Wnt Pathway, KEGG WNT Annotation
<i>FOSL1</i>	NM_005438.2	-0.404	0.501	0.712	Cell Cycle, KEGG WNT Annotation, Transcription Factors, WNT Signaling Target Genes
<i>SNAI1</i>	NM_005985.2	0.24	0.569	0.797	EMTMetastasis
<i>MYLK</i>	NM_053032.2	-0.175	0.572	0.797	EMTMetastasis
<i>CAMK2B</i>	NM_001220.3	0.369	0.588	0.81	KEGG WNT Annotation
<i>CTBP1</i>	NM_001328.2	-0.0632	0.591	0.81	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>NFATC1</i>	NM_172389.1	-0.36	0.601	0.812	Calcium Binding and Signaling, KEGG WNT Annotation
<i>GPC4</i>	NM_001448.2	1.71	0.602	0.812	Canonical Wnt Pathway
<i>PRKCA</i>	NM_002737.2	0.471	0.626	0.826	KEGG WNT Annotation
<i>PLCB1</i>	NM_182734.1	-0.534	0.629	0.826	KEGG WNT Annotation
<i>DIXDC1</i>	NM_001037954.3	-0.176	0.639	0.833	Canonical Wnt Pathway
<i>EFNB1</i>	NM_004429.4	0.197	0.654	0.845	Development & Differentiation, Migration
<i>PPP3R1</i>	NM_000945.3	0.0488	0.667	0.848	KEGG WNT Annotation
<i>BCL9</i>	NM_004326.2	-0.132	0.681	0.857	Canonical Wnt Pathway

<i>EP300</i>	NM_001429.2	0.057	0.688	0.857	Canonical Wnt Pathway, KEGG WNT Annotation
<i>WNT2B</i>	NM_024494.1	-0.256	0.696	0.857	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
<i>MAPK8</i>	NM_002750.2	0.117	0.707	0.857	KEGG WNT Annotation, Planar Cell Polarity (PCP)
<i>JAG1</i>	NM_000214.2	0.266	0.709	0.857	Development & Differentiation, Migration
<i>ID2</i>	NM_002166.4	-0.276	0.718	0.857	Cell Cycle, Development & Differentiation
<i>PPP3CC</i>	NM_005605.4	0.0829	0.722	0.857	KEGG WNT Annotation
<i>SMO</i>	NM_005631.3	-0.28	0.732	0.857	Development & Differentiation, Migration
<i>GSK3B</i>	NM_002093.2	0.0354	0.735	0.857	Canonical Wnt Pathway, KEGG WNT Annotation
<i>ZEB2</i>	NM_014795.3	0.207	0.735	0.857	EMTMetastasis
<i>RHOA</i>	NM_001664.2	-0.0369	0.737	0.857	KEGG WNT Annotation, Planar Cell Polarity (PCP)
<i>CD44</i>	NM_001001392.1	0.0591	0.739	0.857	Adhesion, Migration
<i>FZD7</i>	NM_003507.1	0.33	0.753	0.86	Canonical Wnt Pathway, KEGG WNT Annotation
<i>CDH1</i>	NM_004360.2	-0.306	0.756	0.86	Adhesion, Development & Differentiation, EMTMetastasis
<i>EGFR</i>	NM_201282.1	0.838	0.757	0.86	Adhesion, Calcium Binding and Signaling, Cell Cycle, Development & Differentiation, Migration
<i>TGFB1</i>	NM_000660.3	0.0283	0.812	0.903	EMTMetastasis
<i>WNT5B</i>	NM_032642.2	-0.0997	0.813	0.903	Calcium Binding and Signaling, KEGG WNT Annotation
<i>FRZB</i>	NM_001463.2	0.174	0.818	0.903	WNT Signaling Negative Regulation
<i>CCND2</i>	NM_001759.2	-0.0898	0.84	0.915	Cell Cycle, Development & Differentiation, KEGG WNT Annotation, WNT Signaling Target Genes
<i>PPAP2B</i>	NM_003713.3	-0.259	0.856	0.926	Migration
<i>EGR1</i>	NM_001964.2	-0.149	0.881	0.928	Development & Differentiation, Transcription Factors

<i>TCF7</i>	NM_003202.2	0.0397	0.883	0.928	Canonical Wnt Pathway, KEGG WNT Annotation, Transcription Factors
<i>AHR</i>	NM_001621.3	-0.13	0.885	0.928	Cell Cycle, Transcription Factors
<i>VANGL1</i>	NM_138959.2	0.091	0.886	0.928	KEGG WNT Annotation
<i>BTRC</i>	NM_033637.2	-0.0186	0.887	0.928	KEGG WNT Annotation, WNT Signaling Negative Regulation, WNT Signaling Target Genes
<i>LRP6</i>	NM_002336.1	0.0948	0.904	0.939	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>PRKX</i>	NM_005044.1	-0.0233	0.916	0.946	KEGG WNT Annotation
<i>RAC2</i>	NM_002872.3	-0.0121	0.928	0.951	KEGG WNT Annotation
<i>SFRP4</i>	NM_003014.2	-0.106	0.935	0.953	Canonical Wnt Pathway, KEGG WNT Annotation, WNT Signaling Negative Regulation
<i>STAT3</i>	NM_139276.2	-0.0278	0.943	0.955	EMTMetastasis
<i>CXCR4</i>	NM_003467.2	-0.0396	0.96	0.966	EMTMetastasis
<i>WNT3</i>	NM_030753.3	0.0117	0.985	0.985	Calcium Binding and Signaling, Canonical Wnt Pathway, KEGG WNT Annotation
GENES BELOW THE BACKGROUND LEVEL					
<i>CTGF</i>	NM_001901.2	<20 counts			
<i>PRKACG</i>	NM_002732.2	<20 counts			
<i>DPP10</i>	NM_020868.3	<20 counts			
<i>WNT1</i>	NM_005430.2	<20 counts			
<i>TWIST1</i>	NM_000474.3	<20 counts			
<i>FGF4</i>	NM_002007.2	<20 counts			
<i>MMP3</i>	NM_002422.3	<20 counts			

<i>IGF2</i>	NM_001127598.1	<20 counts			
<i>WNT8A</i>	NM_058244.2	<20 counts			
<i>PPP3R2</i>	NM_147180.2	<20 counts			
<i>TWIST2</i>	NM_057179.2	<20 counts			
<i>PROM1</i>	NM_006017.1	<20 counts			
<i>PLCB4</i>	NM_000933.3	<20 counts			
<i>WNT9A</i>	NM_003395.1	<20 counts			
<i>DKK2</i>	NM_014421.2	<20 counts			
<i>DKK1</i>	NM_012242.2	<20 counts			
<i>WISP1</i>	NM_080838.1	<20 counts			
<i>WNT8B</i>	NM_003393.2	<20 counts			
<i>FZD10</i>	NM_007197.2	<20 counts			
<i>FZD4</i>	NM_012193.2	<20 counts			
<i>WNT7A</i>	NM_004625.3	<20 counts			
<i>SOST</i>	NM_025237.2	<20 counts			
<i>KCNQ1</i>	NM_181798.1	<20 counts			
<i>SFRP2</i>	NM_003013.2	<20 counts			
<i>DLK1</i>	NM_003836.4	<20 counts			
<i>WNT16</i>	NM_057168.1	<20 counts			
<i>FGF7</i>	NM_004675.2	<20 counts			
<i>TLE1</i>	NM_005077.3	<20 counts			
<i>WIF1</i>	NM_007191.2	<20 counts			

<i>COL1A2</i>	NM_000089.3	<20 counts			
<i>DKK3</i>	NM_001018057.1	<20 counts			
<i>WNT9B</i>	NM_003396.1	<20 counts			
<i>FZD9</i>	NM_003508.2	<20 counts			
<i>PYGO1</i>	NM_015617.1	<20 counts			
HOUSEKEEPING IN THE PANEL					
<i>CC2D1B</i>	NM_032449.2	Housekeeping			
<i>COG7</i>	NM_153603.3	Housekeeping			
<i>EDC3</i>	NM_001142443.1	Housekeeping			
<i>GPATCH3</i>	NM_022078.2	Housekeeping			
<i>HDAC3</i>	NM_003883.2	Housekeeping			
<i>MTMR14</i>	NM_022485.3	Housekeeping			
<i>NUBP1</i>	NM_001278506.1	Housekeeping			
<i>PRPF38A</i>	NM_032864.3	Housekeeping			
<i>SAP130</i>	NM_024545.3	Housekeeping			
<i>SF3A3</i>	NM_006802.2	Housekeeping			
<i>TLK2</i>	NM_006852.2	Housekeeping			
<i>ZC3H14</i>	NM_001160103.1	Housekeeping			