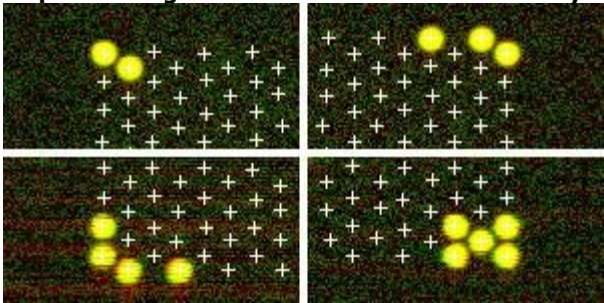


QC Report - Agilent Technologies : 2 Color Gene Expression

QCMetrics InRange (12 of 12)

| | | | |
|------------|--------------------------------------|------------------------|--------------------------|
| Date | Tuesday, December 02, 2008 - 15:53 | BG Method | No Background |
| Image | 167-201-xdr_251485038759_S01_H [1_1] | Background Detrend | On(FeatNCRRange, LoPass) |
| Protocol | GE2-v5_95_Feb07 (Read Only) | Multiplicative Detrend | True |
| User Name | scan | Dye Norm | Linear Lowess |
| Grid | 014850_D_F_20060807 | Linear DyeNorm Factor | 5.48(Red) 1.94(Green) |
| FE Version | 9.5.3.1 | Additive Error | 15(Red)8(Green) |
| | | Saturation Value | 643300 (r), 487703 (g) |

Spot Finding of the Four Corners of the Array



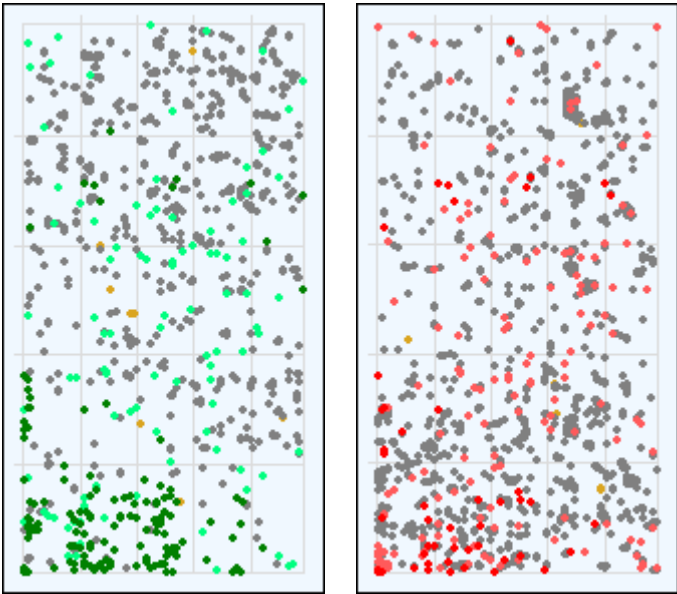
Grid Normal

| Feature | Local Background | |
|---------|------------------|-------|
| | Red | Green |

| | | | | |
|-------------|-----|-----|------|-----|
| Non Uniform | 47 | 135 | 18 | 16 |
| Population | 152 | 99 | 1107 | 605 |

Spatial Distribution of All Outliers on the Array

532 rows x 85 columns



FeatureNonUnif (Red or Green) = 161(0.36%)

GeneNonUnif (Red or Green) = 116 (0.283 %)

- BG NonUniform ● BG Population
- Red FeaturePopulation ● Red Feature NonUniform
- Green FeaturePopulation ● Green Feature NonUniform

Net Signal Statistics

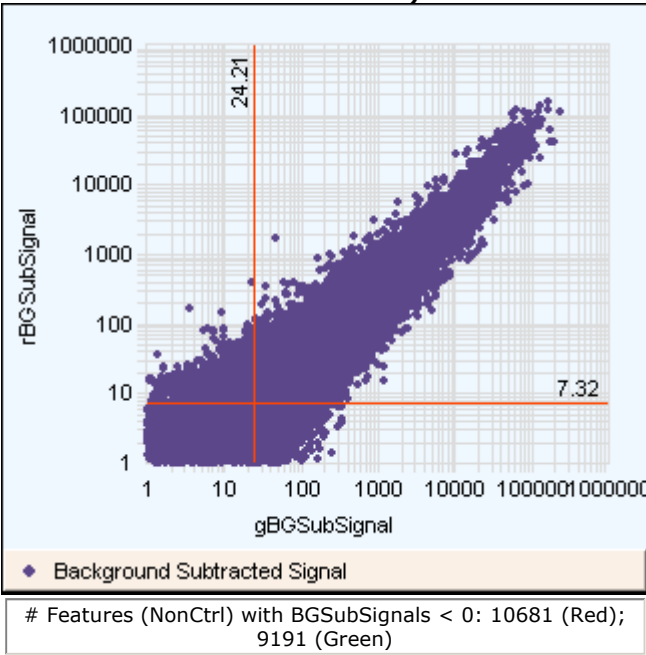
Agilent SpikeIns:

| | Red | Green |
|----------------------|--------|-------|
| # Saturated Features | 16 | 0 |
| 99% of Sig. Distrib. | 208106 | 62886 |
| 50% of Sig. Distrib. | 36668 | 6588 |
| 1% of Sig. Distrib. | 1588 | 252 |

Non-Control probes:

| | Red | Green |
|----------------------|-------|-------|
| # Saturated Features | 9 | 23 |
| 99% of Sig. Distrib. | 12408 | 26260 |
| 50% of Sig. Distrib. | 32 | 42 |
| 1% of Sig. Distrib. | 20 | 10 |

Red and Green Background Corrected Signals (Non-Control Inliers)



Negative Control Stats

Red Green

| | | |
|-----------------------|-------|-------|
| Average Net Signals | 23.16 | 14.59 |
| StdDev Net Signals | 1.96 | 3.65 |
| Average BG Sub Signal | -1.74 | -2.80 |
| StdDev BG Sub Signal | 1.99 | 3.39 |

Local Bkg (inliers)

Red Green

| | | |
|--------|-------|-------|
| Number | 43898 | 44400 |
| Avg | 61.68 | 53.66 |
| SD | 2.20 | 3.53 |

Foreground Surface Fit

Red Green

| | | |
|-----------|-------|-------|
| RMS_Fit | 0.61 | 1.40 |
| RMS_Resid | 2.67 | 4.00 |
| Avg_Fit | 64.81 | 57.20 |

Reproducibility: %CV for Replicated Probes

Median %CV Signal (inliers)

Non-Control probes Agilent SpikeIns
Red Green Red Green

| | | | | |
|-----------------|-------|-------|-------|-------|
| BGSubSignal | 18.60 | 15.31 | 15.85 | 11.47 |
| ProcessedSignal | 6.27 | 6.43 | 4.24 | 4.67 |

Array Uniformity: LogRatios

Non-Control Agilent SpikeIns

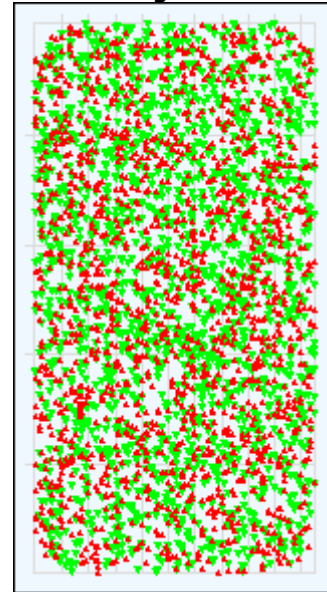
| | | |
|----------------|------|-------|
| AbsAvgLogRatio | 0.23 | 1.01 |
| AverageS/N | 7.29 | 52.30 |

Sensitivity:Agilent SpikeIns - Ratio of Signal to Background for 2 dimmest probes

(+)E1A_r60_n11 (+)E1A_r60_a97

| (g) | (r) | (g) | (r) |
|------|------|-------|------|
| 84.8 | 87.2 | 172.6 | 19.1 |

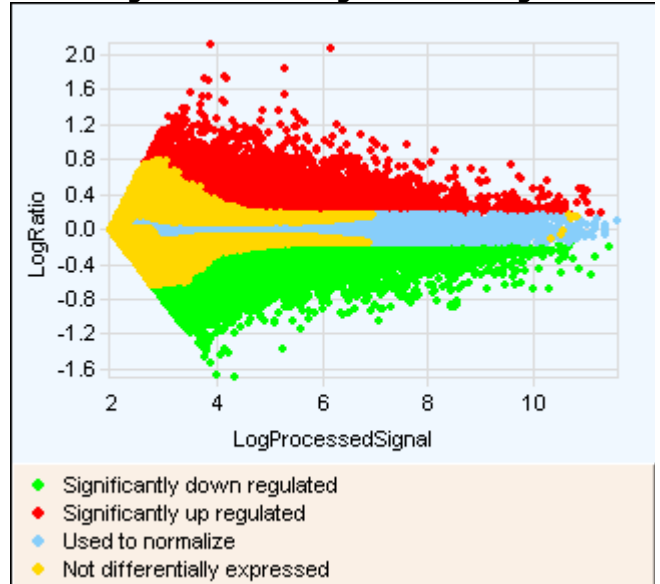
Spatial Distribution of Significantly Up-Regulated and Down-Regulated Features



#Up-Regulated:5336 (Red) ; #Down-Regulated:6283 (Green)

▲ Up-Regulated ▼ Down-Regulated

LogRatio Versus Log Processed Signal



Agilent SpikeIns Signal Statistics

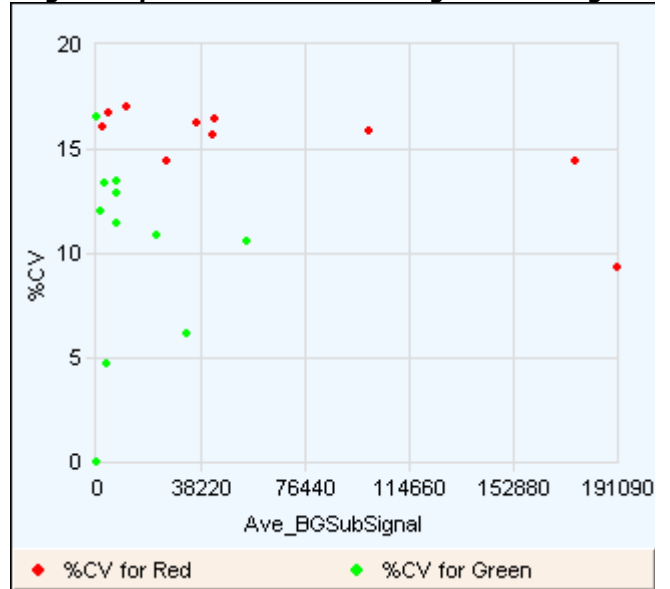
| Probe Name | Exp | Obs | SD | S/N |
|-----------------|-------|-------|------|-------|
| (+)E1A_r60_n9 | -1.00 | -0.09 | 0.01 | 6.47 |
| (+)E1A_r60_a107 | -0.48 | 0.49 | 0.02 | 21.90 |
| (+)E1A_r60_a135 | -0.48 | 0.54 | 0.01 | 37.00 |
| (+)E1A_r60_n11 | -0.48 | 0.56 | 0.01 | 48.40 |
| (+)E1A_r60_1 | 0.00 | 1.06 | 0.01 | 87.06 |
| (+)E1A_r60_a20 | 0.00 | 0.92 | 0.03 | 34.64 |
| (+)E1A_r60_3 | 0.48 | 1.53 | 0.02 | 99.66 |
| (+)E1A_r60_a104 | 0.48 | 1.40 | 0.02 | 58.50 |
| (+)E1A_r60_a97 | 0.48 | 1.56 | 0.03 | 57.24 |
| (+)E1A_r60_a22 | 1.00 | 1.94 | 0.03 | 72.14 |

Evaluation Metrics for GE2_QCMT_Feb07

| Metric Name | Value | UpLim | LowLim | IsMandatory |
|-----------------------------|-------|-------|--------|-------------|
| AnyColorPrcntBGNonUnifOL | 0.08 | 5.00 | NA | False |
| AnyColorPrcntFeatNonUnif... | 0.36 | 1.00 | NA | False |
| absE1aObsVsExpCorr | 0.99 | NA | 0.86 | False |
| absE1aObsVsExpSlope | 1.01 | NA | 0.85 | False |
| gE1aMedCVBkSubSignal | 11.47 | 25.00 | NA | False |
| gNegCtrlAveBGSubSig | -2.80 | 10.00 | -20.00 | False |
| gNegCtrlSDvBGSubSig | 3.39 | 15.00 | NA | False |
| gNonCtrlMedCVBkSubSignal | 15.31 | 25.00 | NA | False |
| rE1aMedCVBkSubSignal | 15.85 | 25.00 | NA | False |
| rNegCtrlAveBGSubSig | -1.74 | 4.00 | -20.00 | False |
| rNegCtrlSDvBGSubSig | 1.99 | 6.00 | NA | False |
| rNonCtrlMedCVBkSubSignal | 18.60 | 25.00 | NA | False |

◆ In Normal Range ◆ Evaluate

Agilent SpikeIns: % CV of Average BG Sub Signal



Agilent SpikeIns: Expected LogRatio Vs Observed LogRatio

