

*Supplementary Material — A.*

**Evaluation of Intra-platform and Inter-platform Data Consistency (Affymetrix, Amersham, Merген, ABI)**

**Table 1-a.** Coefficient of Variations (CVs) of signal intensities across technical replicates within each platform. For each platform, CVs of all replicated measurements per probe were calculated. Table 1-a summarizes the means and standard deviations of the CVs of all probes in each platform.

		<b>MRP1::MC</b>		<b>MRP2::MC</b>	
		mean	std	mean	std
<b>Intra-Platform CVs of intensities</b> <b>(i.e. per sample)</b>					
<b>Affy</b>	Mouse Retina	0.309	0.171	0.318	0.178
	Mouse Cortex	0.265	0.197	0.265	0.197
<b>Amersham</b>	Mouse Retina	0.196	0.132	0.228	0.152
	Mouse Cortex	0.175	0.138	0.175	0.138
<b>Merген</b>	Mouse Retina	0.787	22.441	0.677	4.984
	Mouse Cortex	0.563	7.777	0.563	7.777
<b>ABI</b>	Mouse Retina	0.297	0.236	0.302	0.214
	Mouse Cortex	0.26	0.230	0.26	0.23
<b>Affy</b>	Mouse Retina	0.103	0.072	0.111	0.074
	Mouse Cortex	0.112	0.076	0.112	0.076
<b>Amersham</b>	Mouse Retina	0.101	0.072	0.125	0.076
	Mouse Cortex	0.103	0.063	0.103	0.063
<b>Merген</b>	Mouse Retina	0.17	0.085	0.232	0.117
	Mouse Cortex	0.144	0.071	0.142	0.069
<b>ABI</b>	Mouse Retina	0.139	0.120	0.144	0.111
	Mouse Cortex	0.124	0.115	0.124	0.117
		<b>normalized_filtered</b>			

**Table 1-b.** Coefficient of Variations (CVs) of relative measurements ( $\log_2$ ratios) across technical replicates within each platform. For each platform, CVs of all replicated measurements per probe were calculated. Table 1-b summarizes the means and standard deviations of CVs of all probes in each platform, in addition to the percentage of measurements having absolute  $\log_2$ ratios lower than 1 or higher than 1.

		Intra-Platform CVs of $\log_2$ ratios				MRP1::MC			MRP2::MC		
			%	mean	std	%	mean	std	%	mean	std
Affymetrix	abs(l2r) <= 1 (*)	0.787	0.492	0.441	0.777	0.513	0.448				
	abs(l2r) > 1	0.213	0.341	0.350	0.223	0.359	0.347				
Amersham	abs(l2r) <= 1 (*)	0.744	0.353	0.319	0.744	0.383	0.372				
	abs(l2r) > 1	0.254	0.218	0.252	0.254	0.240	0.278				
Mergen	abs(l2r) <= 1 (*)	0.700	0.666	0.557	0.679	0.694	0.563				
	abs(l2r) > 1	0.297	0.426	0.441	0.317	0.462	0.452				
ABI	abs(l2r) <= 1 (*)	0.738	0.559	0.429	0.733	0.556	0.419				
	abs(l2r) > 1	0.262	0.296	0.307	0.267	0.295	0.297				
Affymetrix	abs(l2r) <= 1 (*)	0.389	0.217	0.131	0.390	0.239	0.143				
	abs(l2r) > 1	0.099	0.148	0.102	0.101	0.159	0.105				
Amersham	abs(l2r) <= 1 (*)	0.533	0.220	0.142	0.523	0.235	0.139				
	abs(l2r) > 1	0.168	0.151	0.126	0.165	0.156	0.107				
Mergen	abs(l2r) <= 1 (*)	0.371	0.367	0.184	0.357	0.382	0.204				
	abs(l2r) > 1	0.144	0.239	0.138	0.143	0.254	0.171				
ABI	abs(l2r) <= 1 (*)	0.383	0.234	0.192	0.384	0.243	0.192				
	abs(l2r) > 1	0.179	0.147	0.141	0.183	0.148	0.128				

**Table 1-c.** Pearson and Spearman correlation coefficients of signal intensities among technical replicates within each platform. For each platform, there are five technical replicates per sample. Pearson and Spearman correlation coefficients were calculated for each possible pair of replicates, before and after filtering. The mean and standard deviation of correlation coefficients are reported in Table 1-c.

Intra-Platform correlation coefficients of log2ratios		MRP1::MC				MRP2::MC			
		Pearson		Spearman		Pearson		Spearman	
		mean	std	mean	std	mean	std	mean	std
Affymetrix	unfiltered	0.776	0.116	0.707	0.151	0.771	0.120	0.702	0.157
Amersham		0.888	0.058	0.836	0.084	0.872	0.073	0.821	0.095
Mergen		0.770	0.122	0.711	0.157	0.763	0.125	0.709	0.155
ABI		0.808	0.098	0.704	0.151	0.815	0.095	0.709	0.149
Affymetrix	filtered	0.947	0.029	0.910	0.049	0.935	0.042	0.894	0.068
Amersham		0.955	0.027	0.925	0.043	0.949	0.033	0.911	0.056
Mergen		0.906	0.074	0.856	0.112	0.897	0.064	0.852	0.089
ABI		0.967	0.017	0.946	0.028	0.965	0.019	0.943	0.032

**Table 2-a.** Pearson and Spearman correlation coefficients of log<sub>2</sub>ratios (normalized and filtered) across platforms were derived using RS(RefSeq)-, RSEXON (RefSeq-Exon)- based probe matching criteria. For each combination of probe matching approach, the upper triangle matrix corresponds to Pearson correlation coefficients, and the lower triangle section is Spearman correlations.

Inter-Platform correlation coefficients of log <sub>2</sub> ratios	MRP1::MC				MRP2::MC						
	Affymetrix	Amersham	Mergen	ABI	Affymetrix	Amersham	Mergen	ABI	illumina		
<b>RS</b>											
Affymetrix	1	0.783	0.807	0.830	0.719		0.783	0.790	0.835	0.731	
Amersham	0.739	1	0.767	0.806	0.703		0.739	0.751	0.807	0.716	
Mergen	0.728	0.707	1	0.814	0.713		0.705	0.688	0.793	0.71	
ABI	0.749	0.752	0.716	1	0.742		0.761	0.754	0.687	0.755	
illumina	0.65	0.634	0.611	0.621	1		0.677	0.654	0.618	0.647	
<b>RS (Filtered)</b>											
Affymetrix	1	0.872	0.908	0.906	0.863		1	0.874	0.903	0.900	0.882
Amersham	0.857	0.832	1	0.852	0.826		0.859	1	0.853	0.863	0.835
Mergen	0.892	0.841	0.861	0.894	0.861		0.879	0.833	1	0.883	0.861
ABI	0.889	0.841	0.861	1	0.875		0.886	0.835	0.848	1	0.873
illumina	0.827	0.794	0.821	0.832	1		0.857	0.814	0.839	0.858	1
<b>RSEXON</b>											
Affymetrix	1	0.806	0.826	0.847	0.733		1	0.808	0.805	0.853	0.74
Amersham	0.762	1	0.790	0.824	0.718		0.767	1	0.777	0.826	0.731
Mergen	0.744	0.734	1	0.845	0.715		0.717	0.715	1	0.822	0.706
ABI	0.770	0.762	0.731	1	0.754		0.786	0.767	0.696	1	0.764
illumina	0.665	0.651	0.613	0.628	1		0.687	0.668	0.608	0.652	1
<b>RSEXON (Filtered)</b>											
Affymetrix	1	0.887	0.912	0.920	0.877		1	0.890	0.908	0.917	0.896
Amersham	0.881	1	0.866	0.875	0.844		0.887	1	0.865	0.880	0.85
Mergen	0.899	0.853	1	0.910	0.876		0.886	0.855	1	0.903	0.872
ABI	0.910	0.855	0.880	1	0.894		0.911	0.856	0.876	1	0.889
illumina	0.845	0.821	0.836	0.86	1		0.873	0.841	0.85	0.884	1

**Table 2-b.** Inter-platform Pearson and Spearman correlation coefficients of intensities (filtered and percentile-transformed) were derived using UG(UniGene)-, RS(RefSeq)-, RSEXON (RefSeq-Exon)- based probe matching criteria. For each combination of probe matching approach, the upper triangle matrix corresponds to Pearson correlation coefficients, and the lower triangle section is Spearman correlations.

Inter-platform Correlations of Percentile-transformed Intensities	MRP1				MRP2				MC						
	Affymetrix	Amersham	Mergen	ABI	illumina	Affymetrix	Amersham	Mergen	ABI	illumina	Affymetrix	Amersham	Mergen	ABI	illumina
<b>UG</b>															
Affymetrix	1	0.634	0.583	0.645	0.523	1	0.626	0.577	0.649	0.528	1	0.619	0.589	0.638	0.520
Amersham	0.634	1	0.569	0.652	0.481	0.626	1	0.548	0.648	0.484	0.619	1	0.572	0.649	0.480
Mergen	0.585	0.572	1	0.611	0.497	0.579	0.551	1	0.603	0.490	0.591	0.574	1	0.614	0.511
ABI	0.656	0.672	0.613	1	0.570	0.657	0.665	0.602	1	0.579	0.649	0.669	0.618	1	0.566
illumina	0.540	0.506	0.508	0.583	1	0.545	0.507	0.499	0.589	1	0.538	0.507	0.524	0.581	1
<b>UG (Filtered)</b>															
Affymetrix	1	0.536	0.449	0.455	0.379	1	0.518	0.452	0.457	0.408	1	0.532	0.477	0.479	0.423
Amersham	0.548	1	0.481	0.562	0.450	0.528	1	0.460	0.557	0.445	0.544	1	0.497	0.577	0.472
Mergen	0.456	0.483	1	0.435	0.353	0.455	0.461	1	0.408	0.371	0.485	0.499	1	0.455	0.403
ABI	0.479	0.576	0.449	1	0.511	0.477	0.570	0.422	1	0.506	0.501	0.589	0.467	1	0.533
illumina	0.402	0.460	0.362	0.513	1	0.429	0.457	0.378	0.506	1	0.450	0.487	0.413	0.535	1
<b>RS</b>															
Affymetrix	1	0.659	0.639	0.696	0.487	1	0.652	0.631	0.701	0.501	1	0.652	0.651	0.698	0.494
Amersham	0.663	1	0.591	0.692	0.473	0.656	1	0.568	0.685	0.478	0.656	1	0.590	0.685	0.467
Mergen	0.643	0.593	1	0.657	0.503	0.636	0.571	1	0.648	0.498	0.655	0.593	1	0.669	0.517
ABI	0.712	0.723	0.666	1	0.603	0.713	0.713	0.654	1	0.608	0.716	0.716	0.679	1	0.602
illumina	0.510	0.506	0.522	0.622	1	0.521	0.508	0.516	0.624	1	0.521	0.503	0.539	0.622	1
<b>RS (Filtered)</b>															
Affymetrix	1	0.563	0.483	0.544	0.350	1	0.537	0.472	0.539	0.379	1	0.561	0.502	0.568	0.391
Amersham	0.572	1	0.487	0.621	0.442	0.545	1	0.460	0.613	0.430	0.569	1	0.490	0.628	0.459
Mergen	0.489	0.488	1	0.496	0.402	0.474	0.460	1	0.472	0.382	0.507	0.491	1	0.517	0.427
ABI	0.568	0.641	0.518	1	0.564	0.562	0.631	0.493	1	0.564	0.591	0.645	0.539	1	0.586
illumina	0.372	0.456	0.412	0.568	1	0.393	0.444	0.394	0.567	1	0.413	0.478	0.447	0.589	1

