

## **Supplementary Information**

### **Optimization of small-scale sample preparation for high-throughput OpenArray analysis**

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**Figure S1.** OpenArray and manual qPCR results from 6-well samples.

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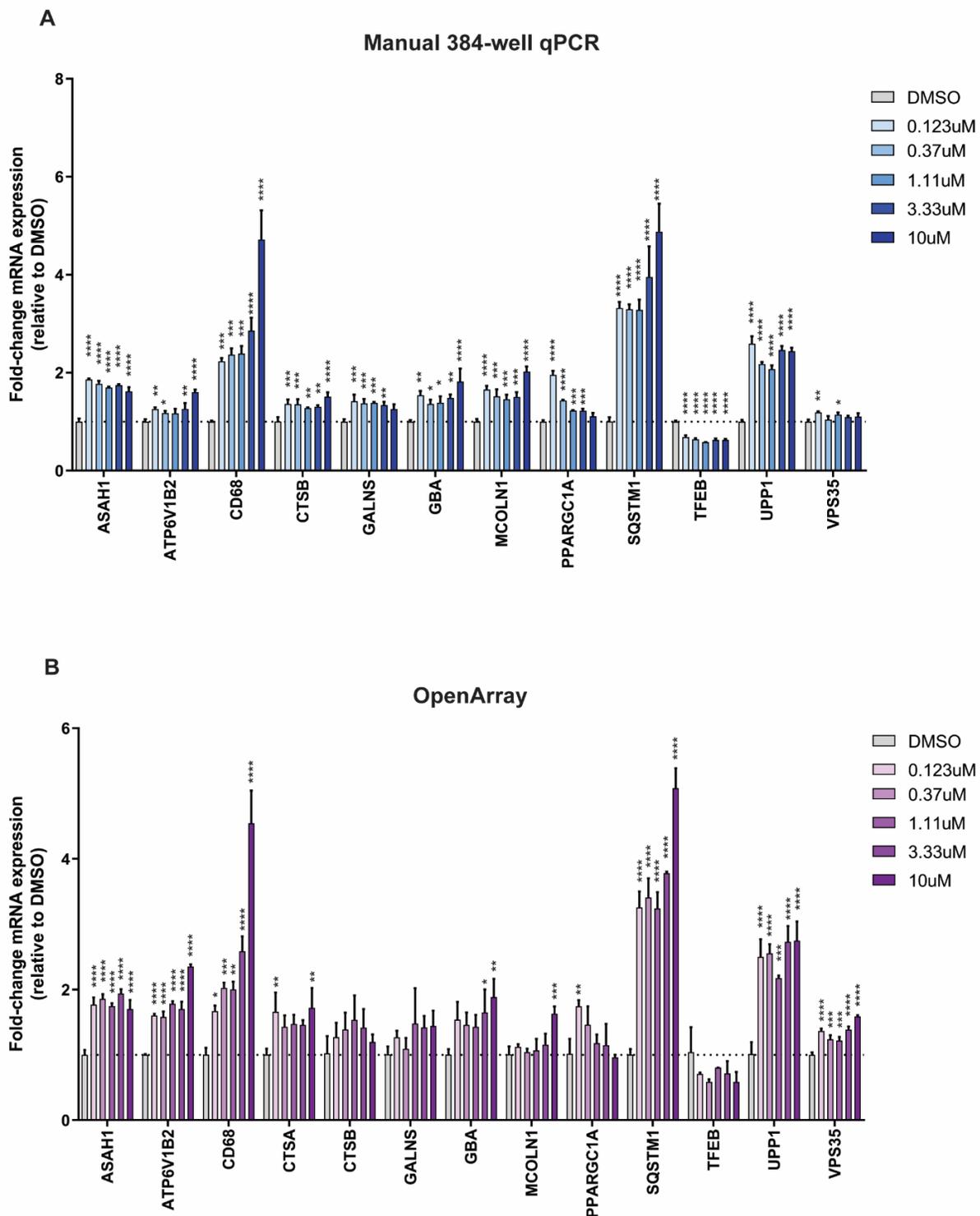
**Figure S3.** Biological replicate C<sub>rt</sub> values of small-scale sample preparation methods.

**Table S1. Percentage of genes assayed that showed higher CV% with OpenArray compared to manual 384-well 10 $\mu$ L qPCR.**

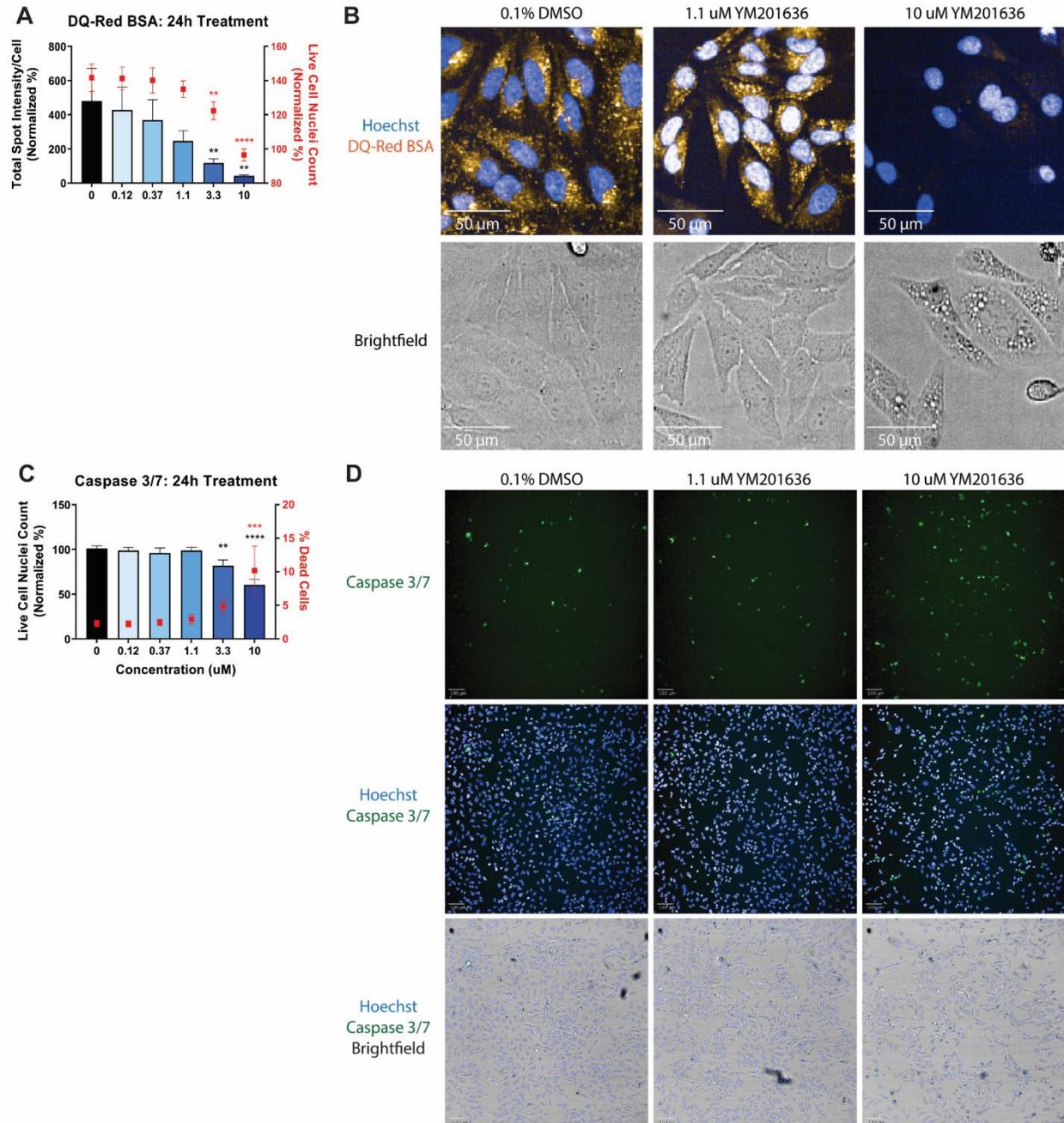
	Treatment Group					
	DMSO	0.123 $\mu$ M	0.370 $\mu$ M	1.111 $\mu$ M	3.333 $\mu$ M	10 $\mu$ M
Percentage of genes assayed	83.33	66.67	75.00	75.00	75.00	50.00

**Table S2. Percentage of genes that showed lower CV% with Cells-to-CT with preamplification compared to other small-scale sample preparation methods across biological replicates.**

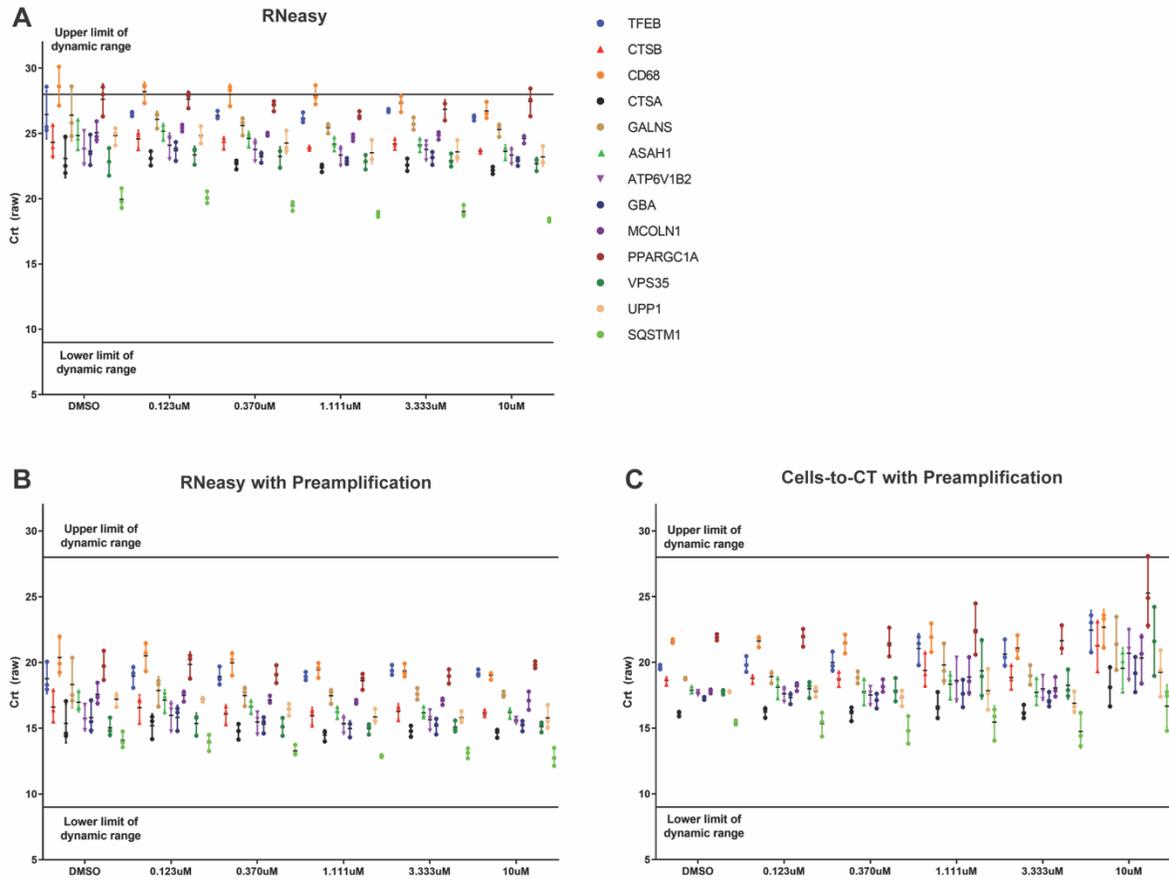
	Treatment Group					
Compared to:	DMSO	0.123 $\mu$ M	0.370 $\mu$ M	1.111 $\mu$ M	3.333 $\mu$ M	10 $\mu$ M
RNeasy	92.3	69.2	61.5	30.8	53.8	38.5
RNeasy+Preamplification	84.6	76.9	61.5	38.5	53.8	23.1



**Figure S1. Comparison of larger volume qPCR with OpenArray.** 6-well HeLa samples were prepared using RNeasy protocol and technical replicates (n=3) were assessed via (A) manual 384-well qPCR with 10 $\mu$ L reaction volume or (B) OpenArray. Data are means  $\pm$ SD (n=3 technical replicates). \* $p$  $\leq$ 0.05, \*\* $p$  $\leq$ 0.01, \*\*\* $p$  $\leq$ 0.001, \*\*\*\* $p$  $\leq$ 0.0001 compared to DMSO by one-way ANOVA.



**Figure S2. YM201636 causes lysosomal dysfunction and cell toxicity at high doses.** HeLa cells treated with YM201636 for 24h were analyzed via (A) DQ-Red BSA assay with (B) 20x representative images shown, and (C) Caspase 3/7 with (D) 10x representative images shown. Data are means  $\pm$ SD from 3 biological replicates.



**Figure S3. Lack of RNA input normalization can affect Cells-to-CT protocol.** Raw  $C_{rt}$  values of biological replicates ( $n=3$ ) resulting from use of (A) RNeasy, (B) RNeasy with preamplification, (C) Cells-to-CT with preamplification on 96-well samples. Data are means  $\pm$ SD.