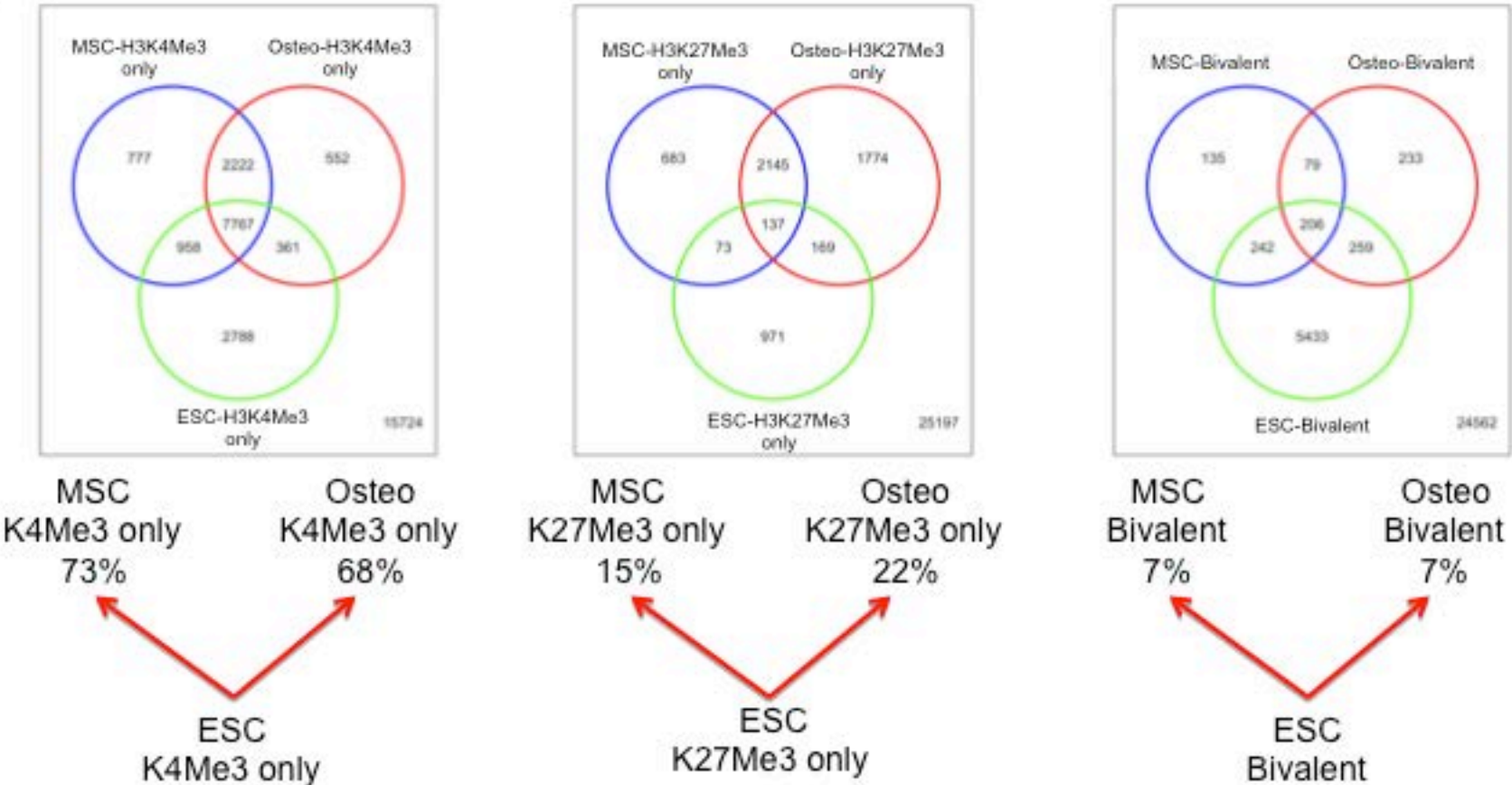


Supplemental Fig. 1

A

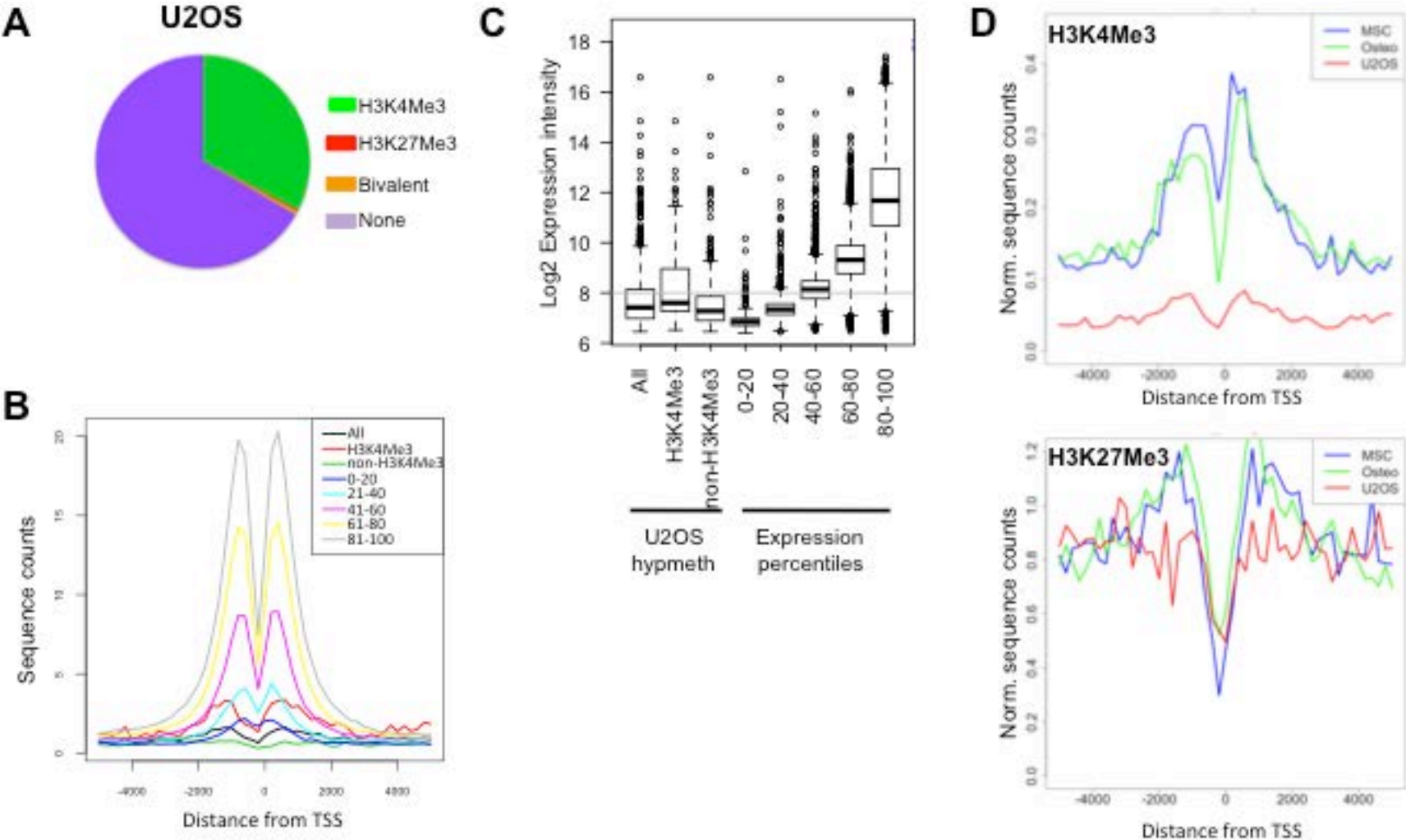
	U2OS hypermethylated	U2OS non- methylated	p value
ESC H3K4Me3 marked	20.8 %	66.2 %	9.7E-71
ESC Bivalent marked	78.9 %	32.9 %	8.1E-72

B

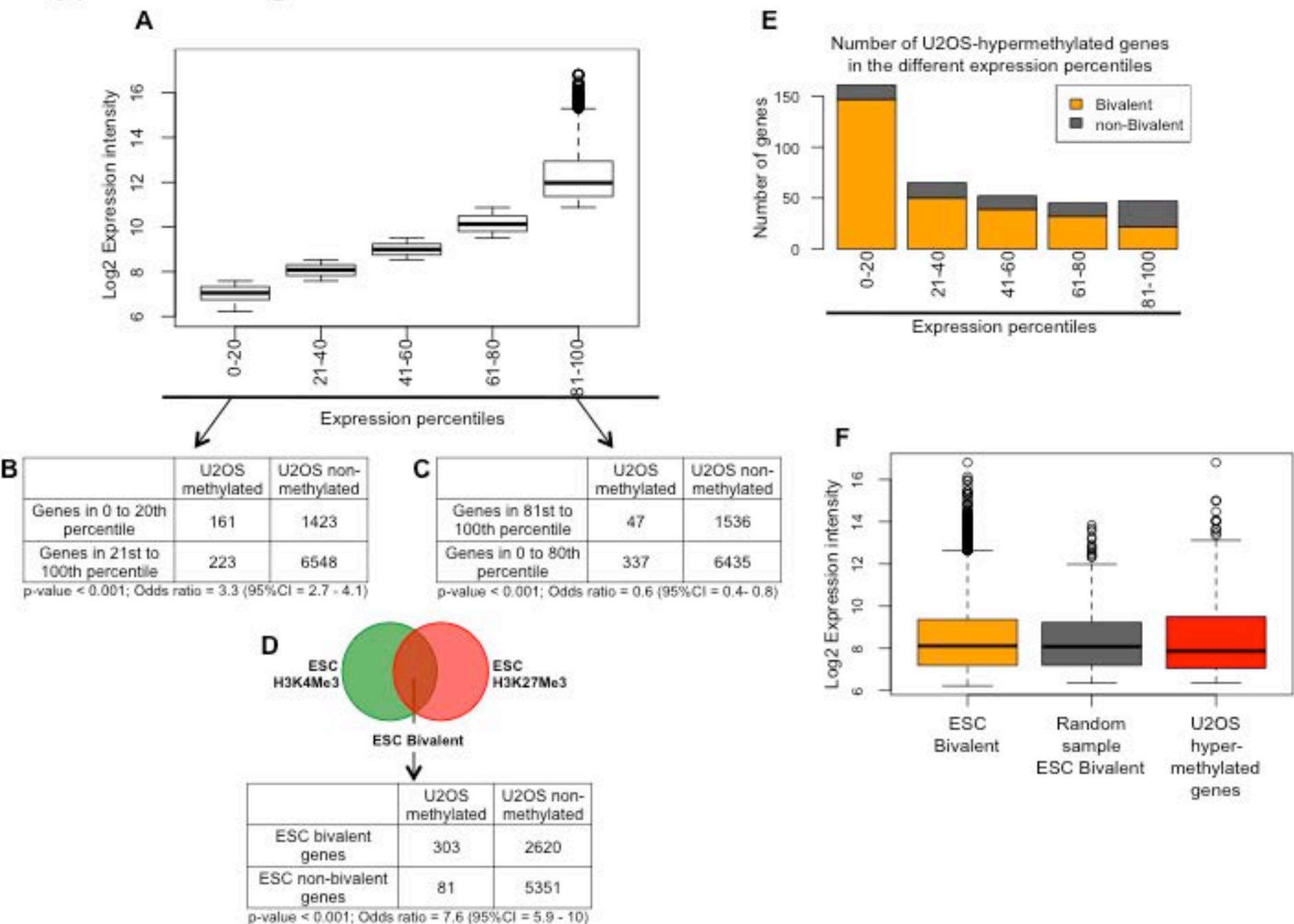


Percentages of modified ESC genes that retain the corresponding mark in MSC and Osteoblasts

Supplemental Fig. 2

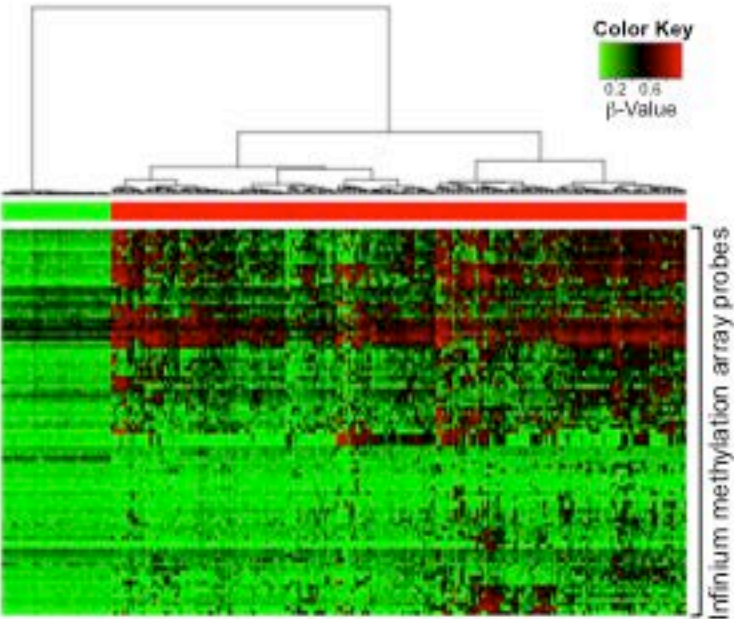


Supplemental Fig. 3

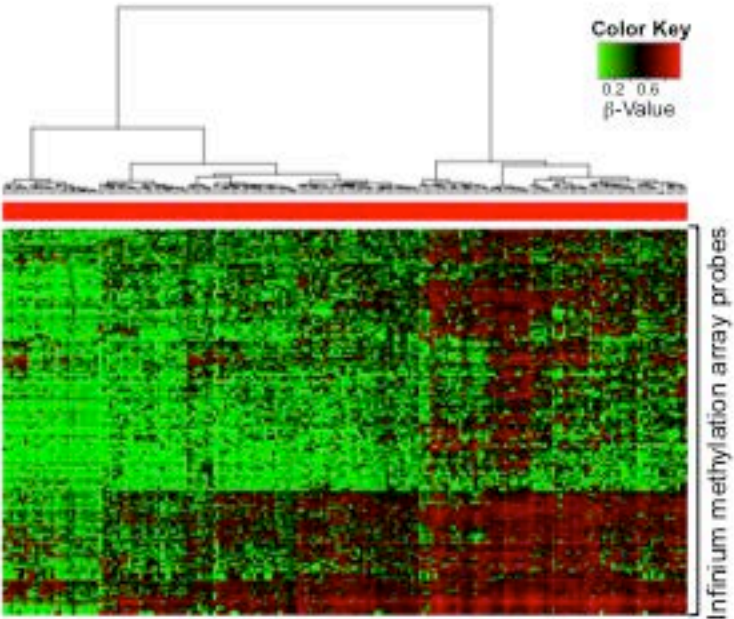


Supplemental Fig. 4

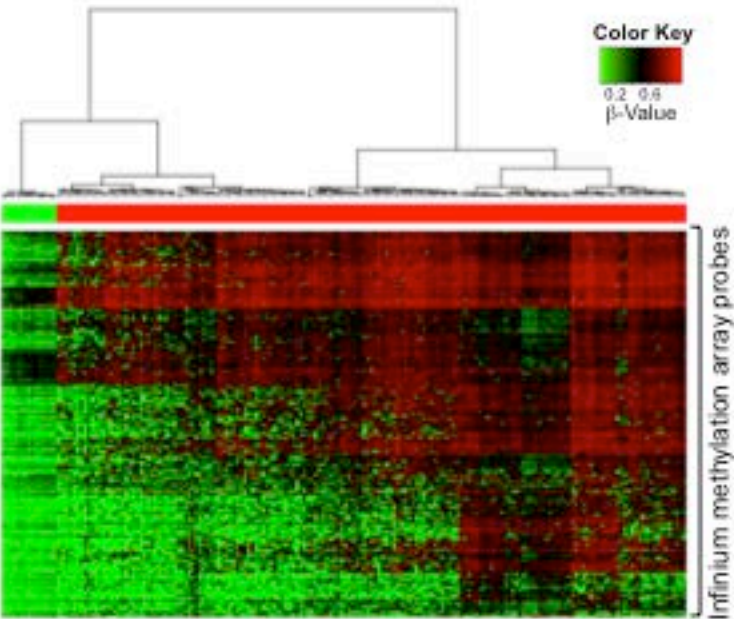
A



C



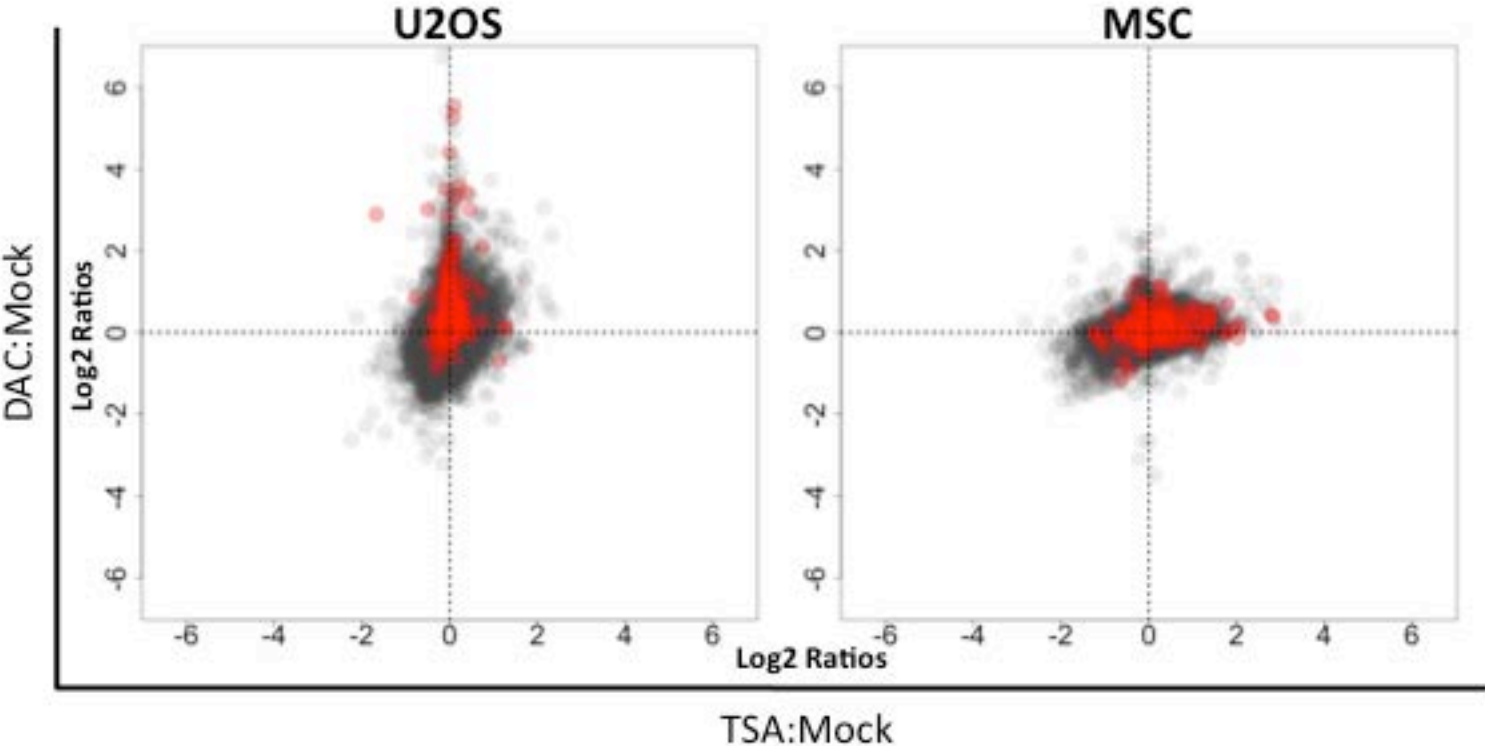
B



D

	Percent cell line methylated probes that are methylated $\geq 5\%$ of TCGA samples	Percent cell line non-methylated probes that are methylated $\geq 5\%$ of TCGA samples	p-value
Colon	99	16	$< 1.52 \times 10^{-164}$
Breast	99	18	1.52×10^{-164}
Lung	80	13	1.56×10^{-88}

Supplemental Fig. 5



Supplemental Fig. 6

