

**S11 Table.** The enrichment analysis of the top 100 genes that have the highest gene average gravitation score between chromatin regulation factors (CRFs) and non-CRFs.

Cancer type	Number of CRF genes	Number of non-CRF genes	Adjusted p-value ( <i>q</i> )	Odd ratio	Number of CRF genes	Number of all non-CRF genes
BRCA	6	94	$1.6 \times 10^{-3}$	7.6		
COAD	3	97	0.12	3.6		
GBM	4	96	0.04	4.9		
HNSC	4	96	0.04	4.9		
KIRC	7	93	$2.3 \times 10^{-4}$	9.0	176	20286
LUAD	7	93	$2.3 \times 10^{-5}$	9.0		
LUSC	3	97	0.12	3.6		
OV	6	94	$1.6 \times 10^{-3}$	7.6		
UCEC	5	95	$8.5 \times 10^{-3}$	6.2		