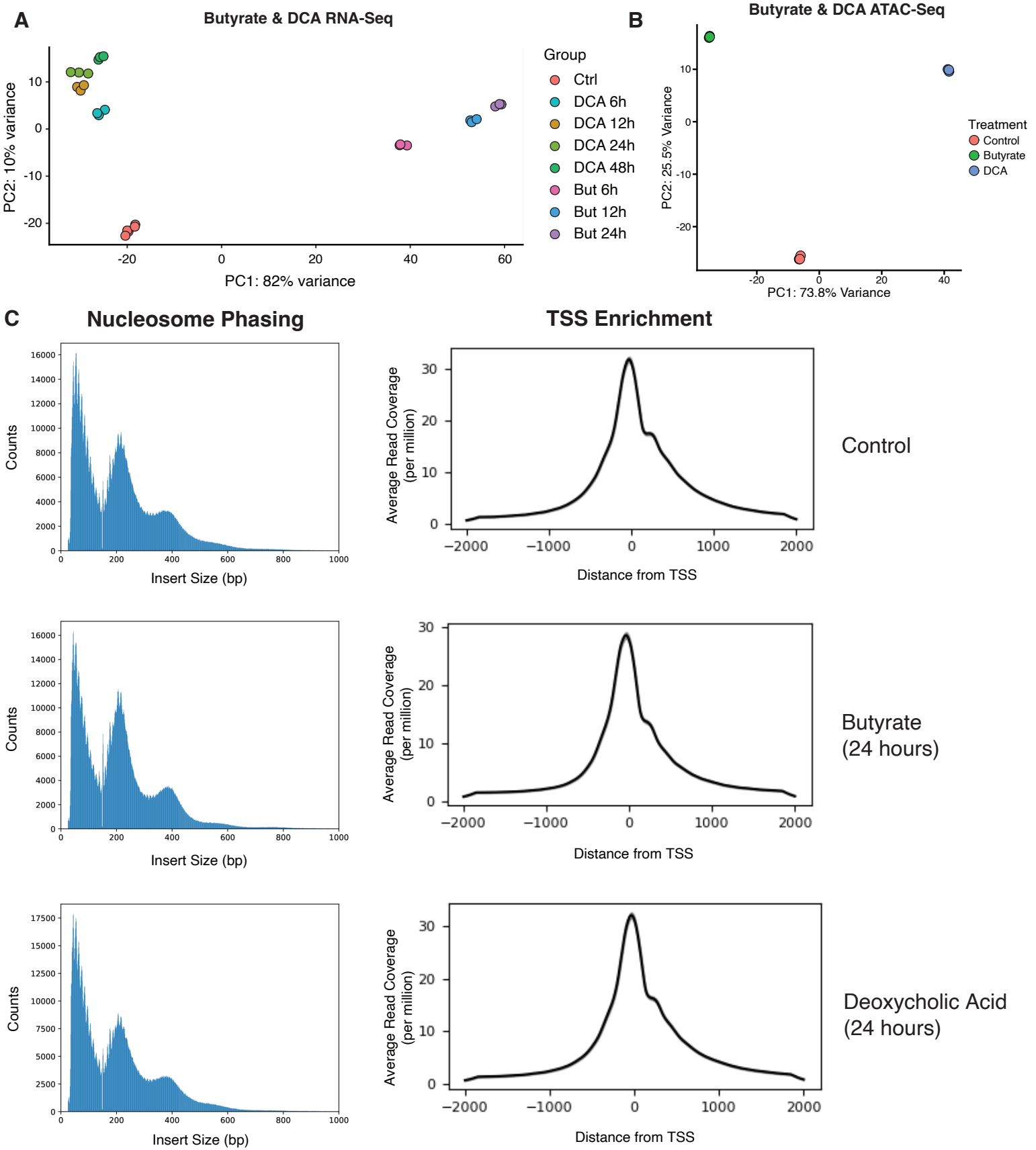
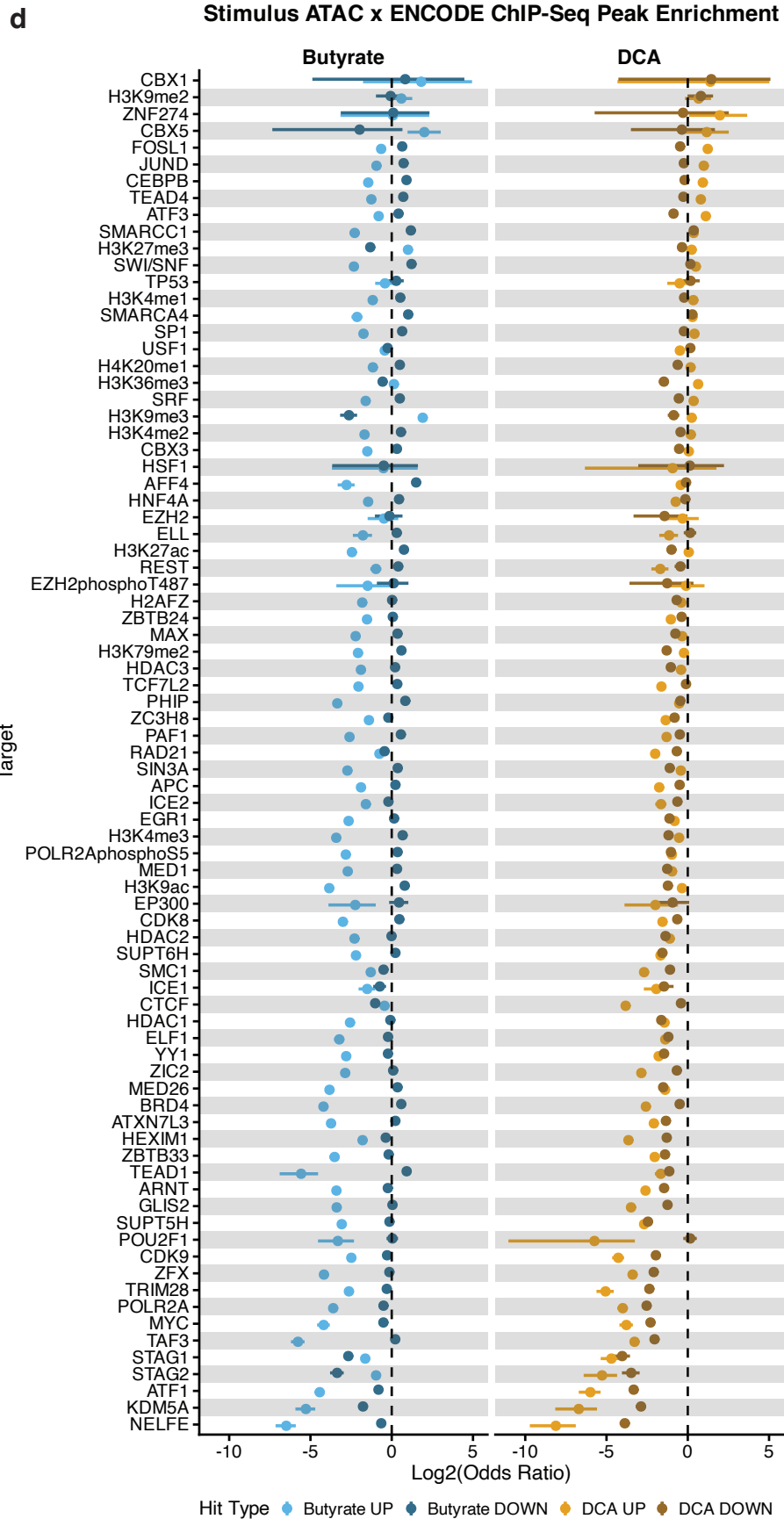
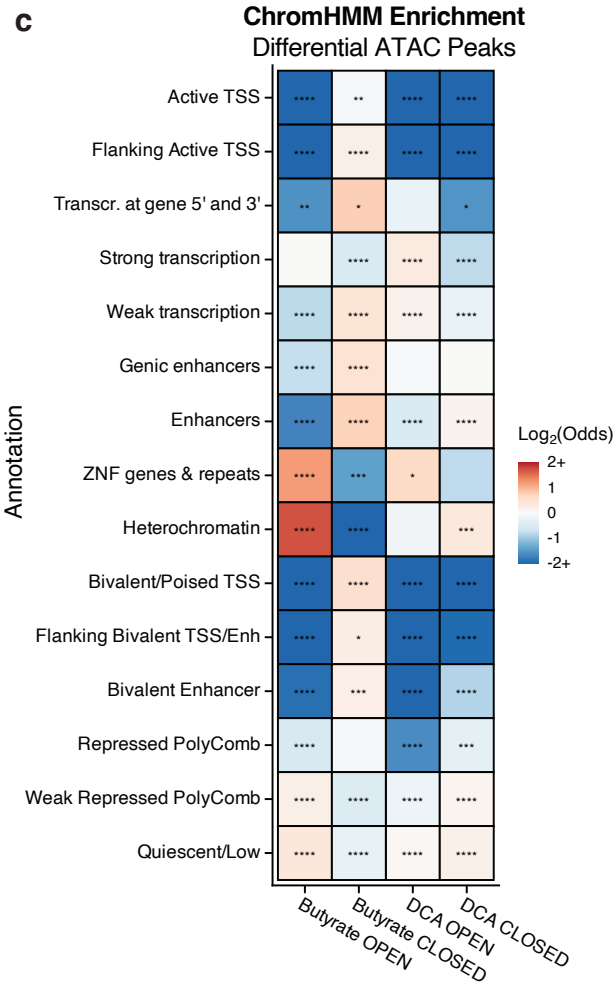
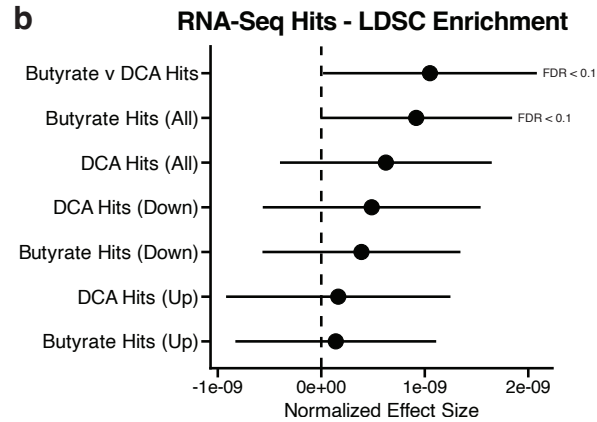
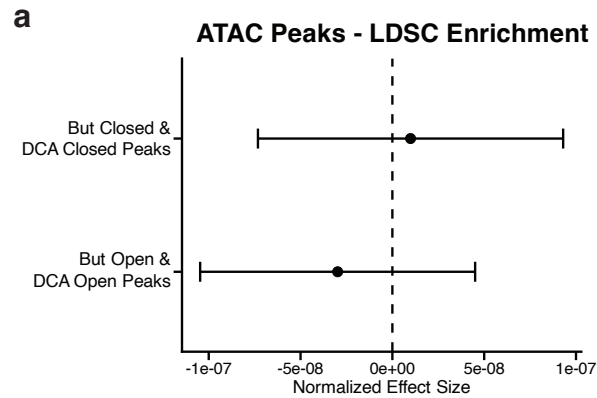


Supplementary Figure 1



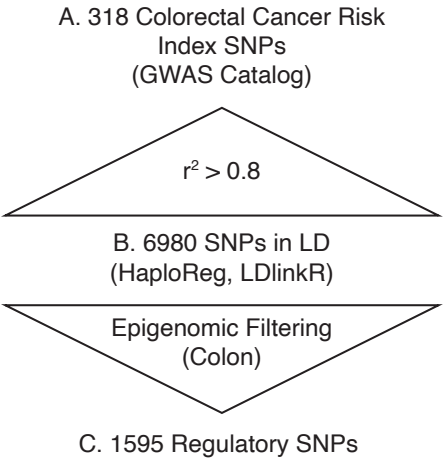
Supp. Figure 2



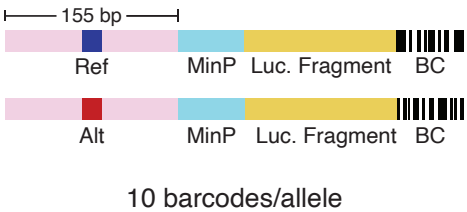
Supp. Figure 3

a Primary Colon MPRA Library

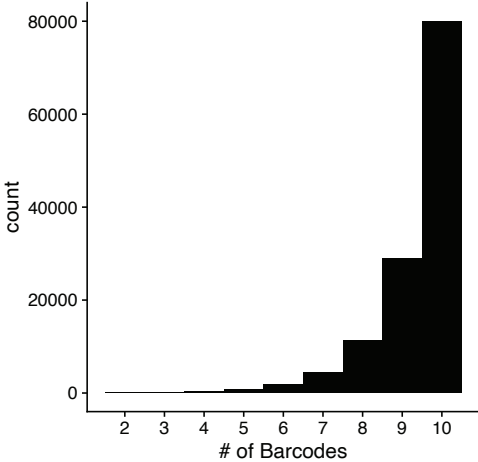
SNP filtering



Oligo design

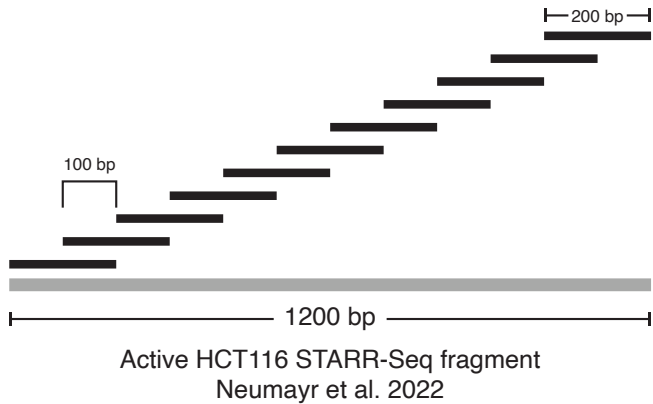


of Barcodes in RNA Libraries

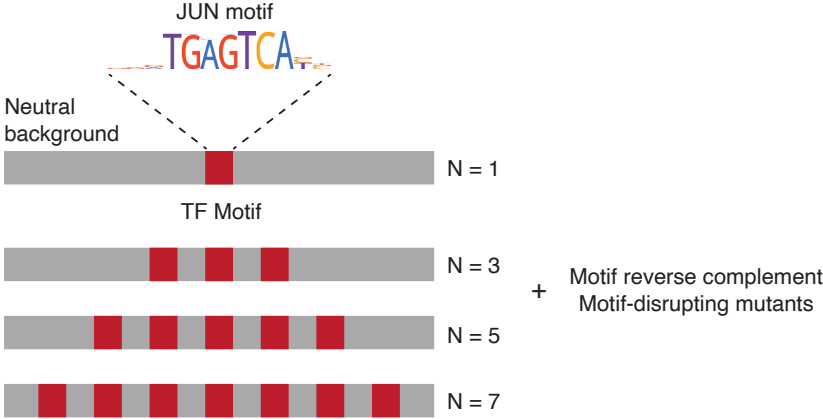


b HCT116 MPRA Positive Control Design

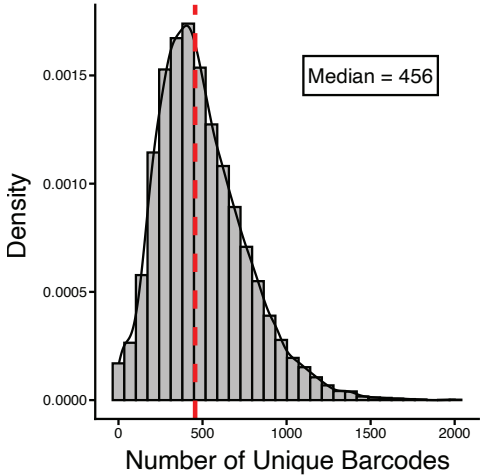
HCT116 enhancer windows



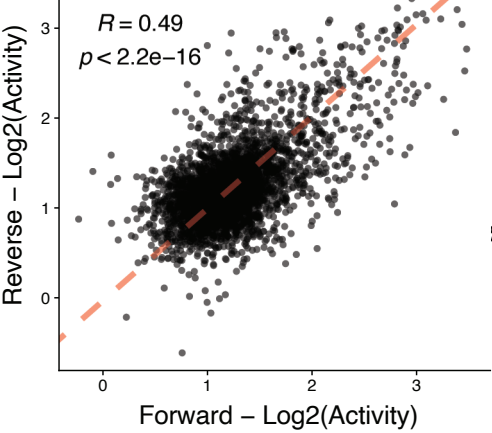
TF motif repeats



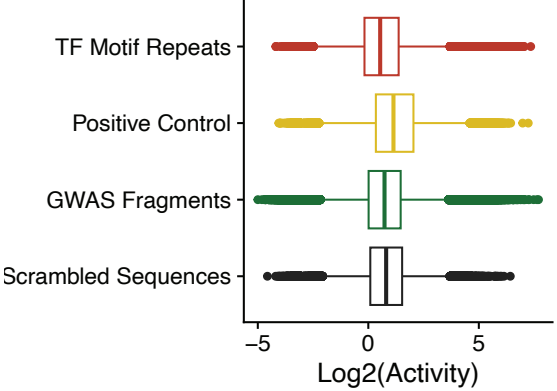
c Barcodes per Fragment



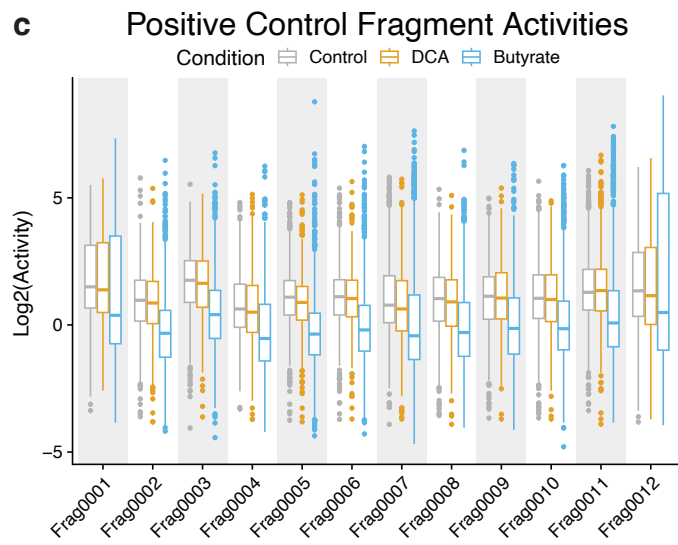
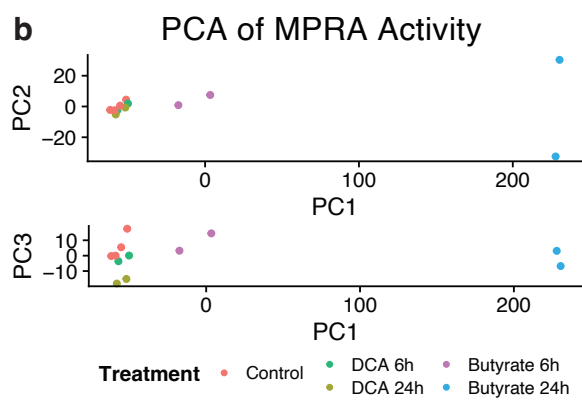
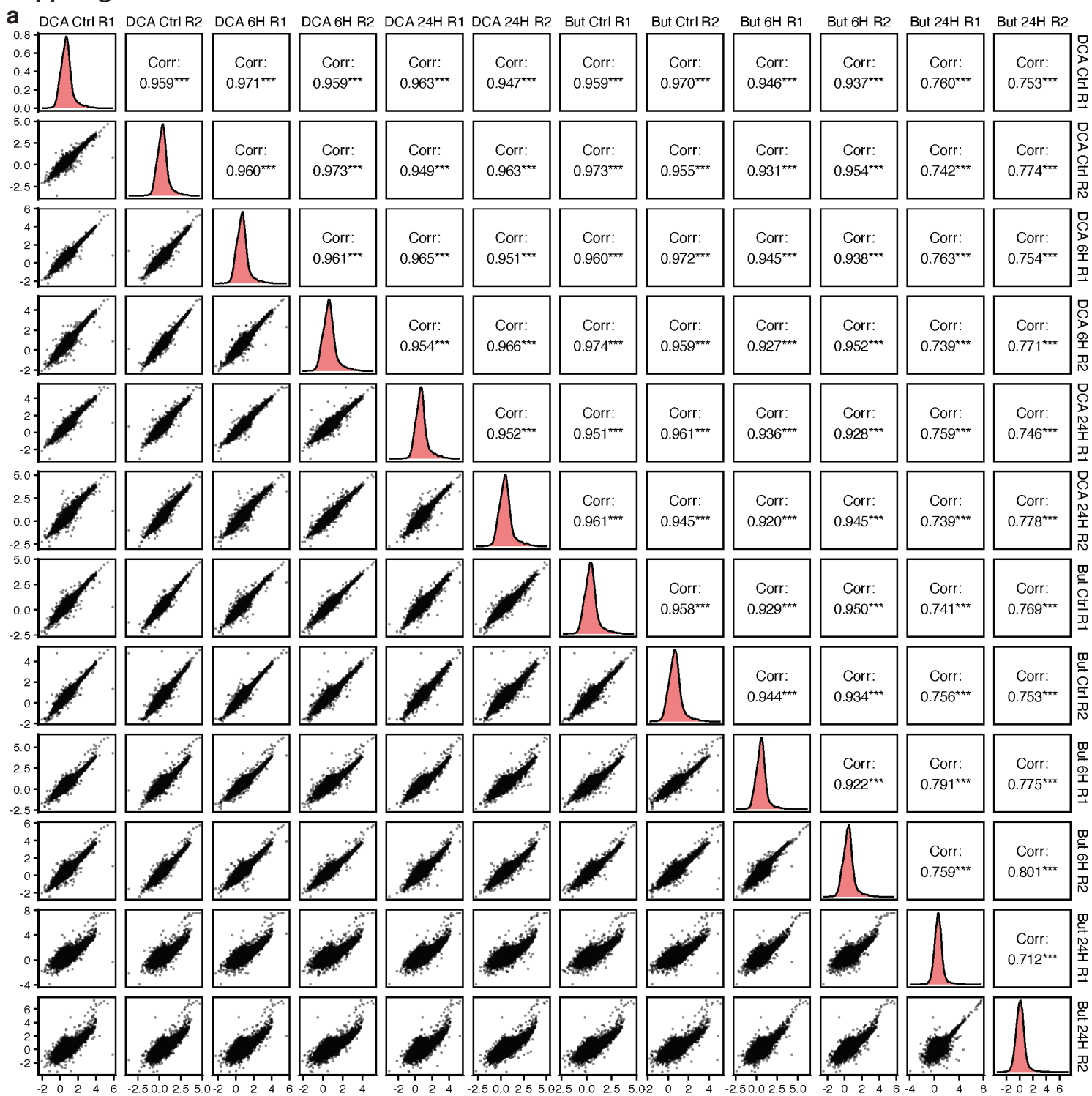
d Forward vs Reverse Complement Activity



e Fragment Activities by Type

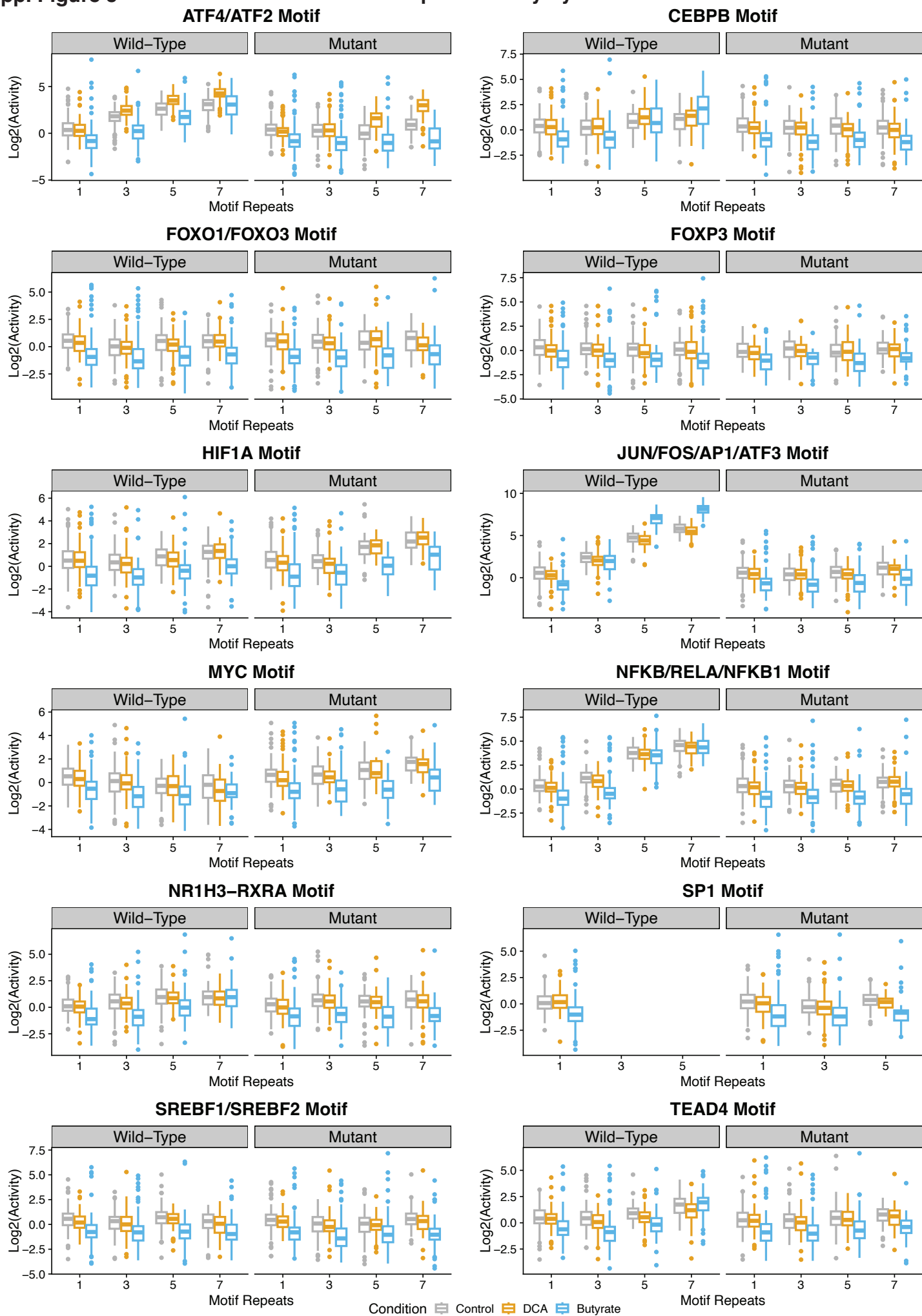


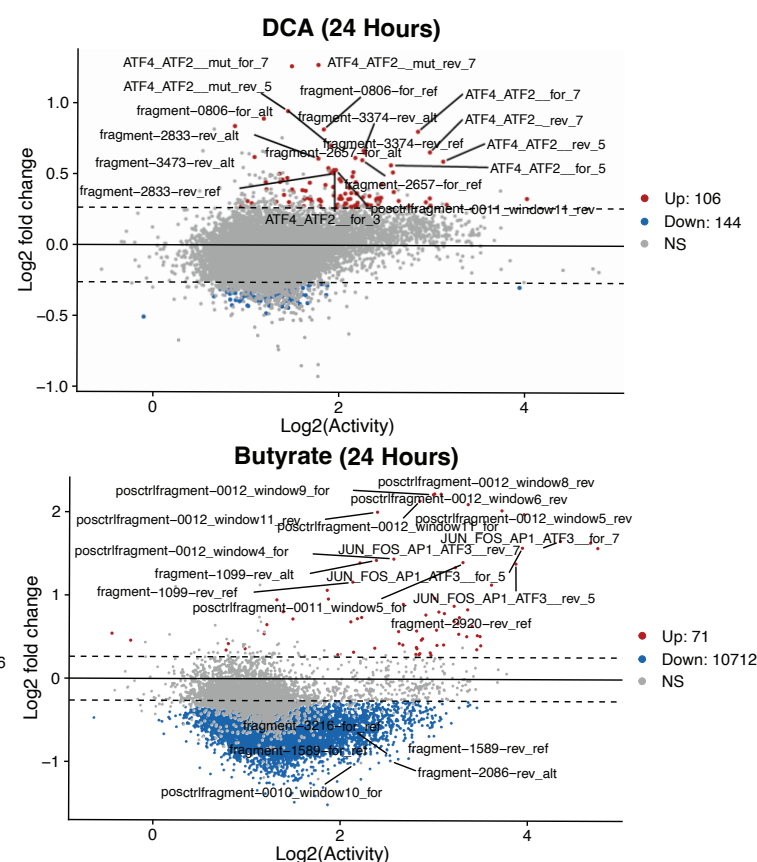
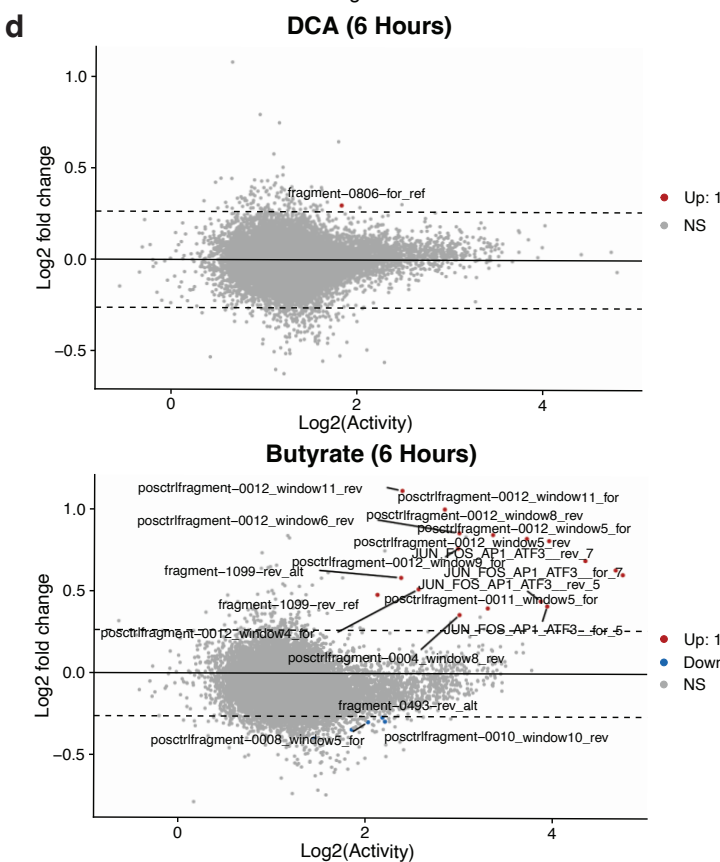
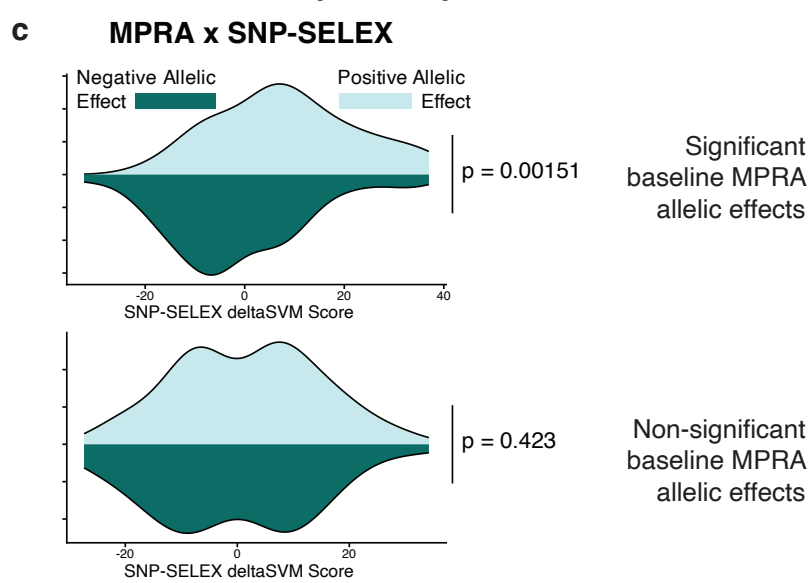
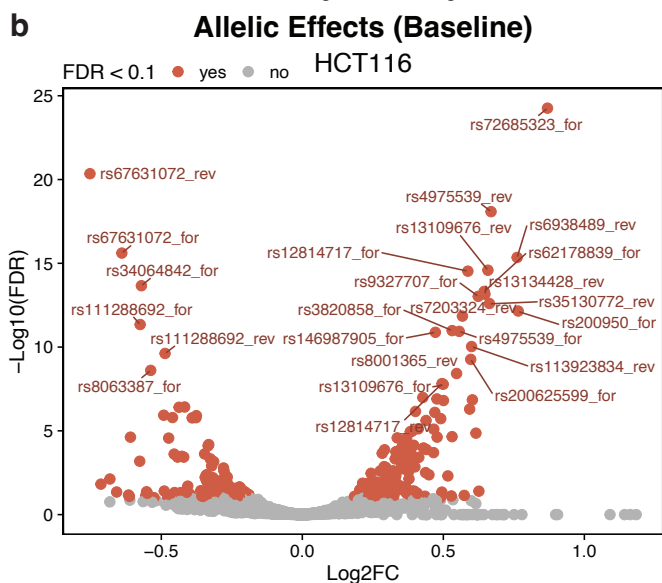
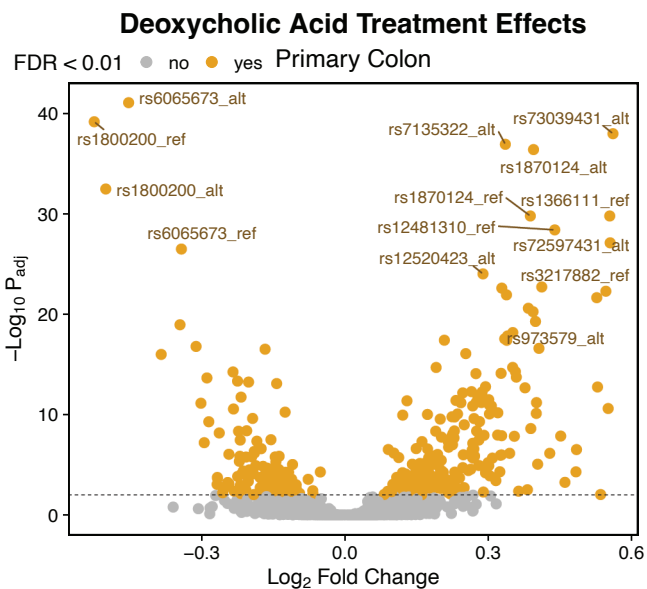
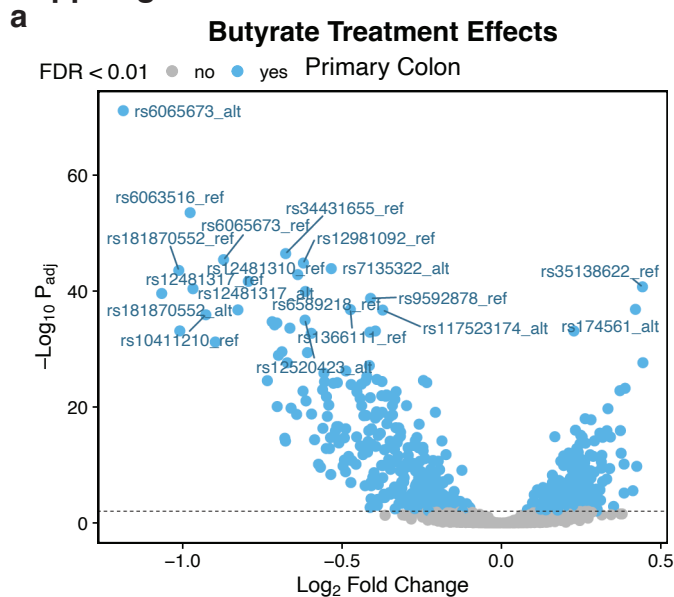
Supp. Figure 4



Supp. Figure 5

TF Motif Repeat Activity by Condition

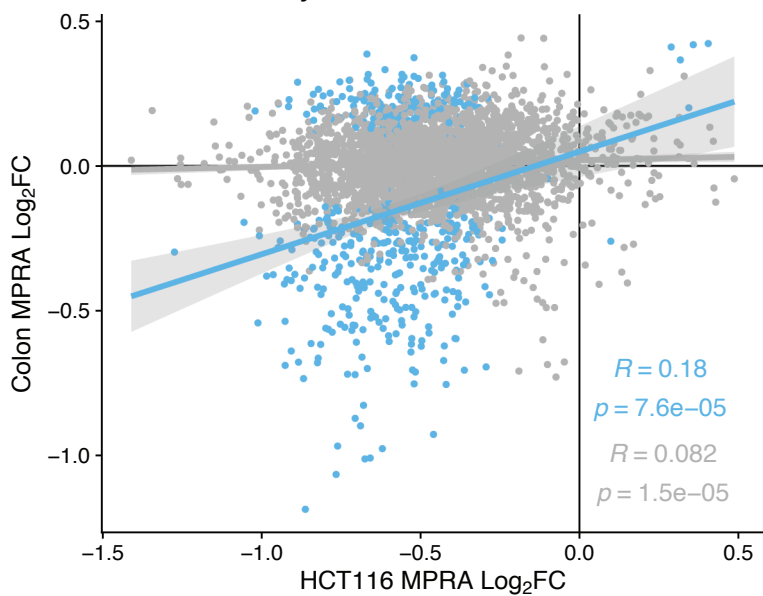




Supp. Figure 7

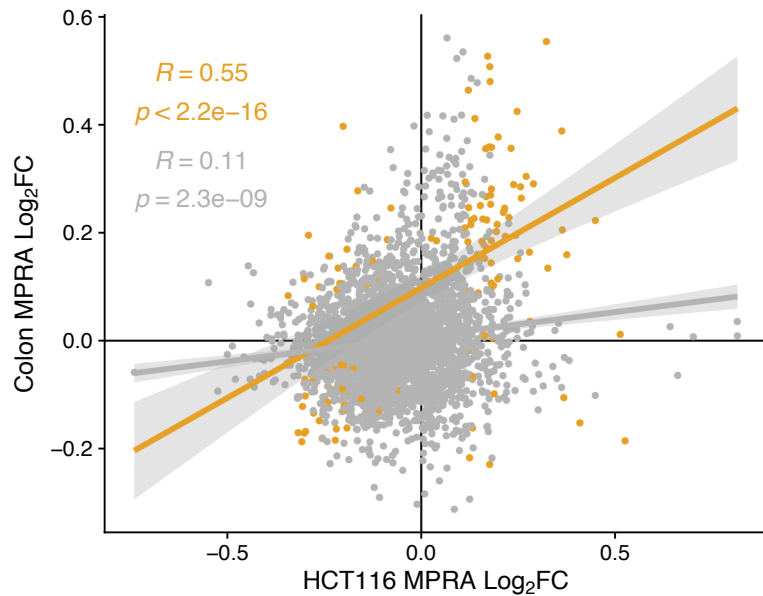
Colon vs HCT116 MPRA Treatment Effects

Butyrate Treatment Effect



FDR < 0.001 Shared Not Shared

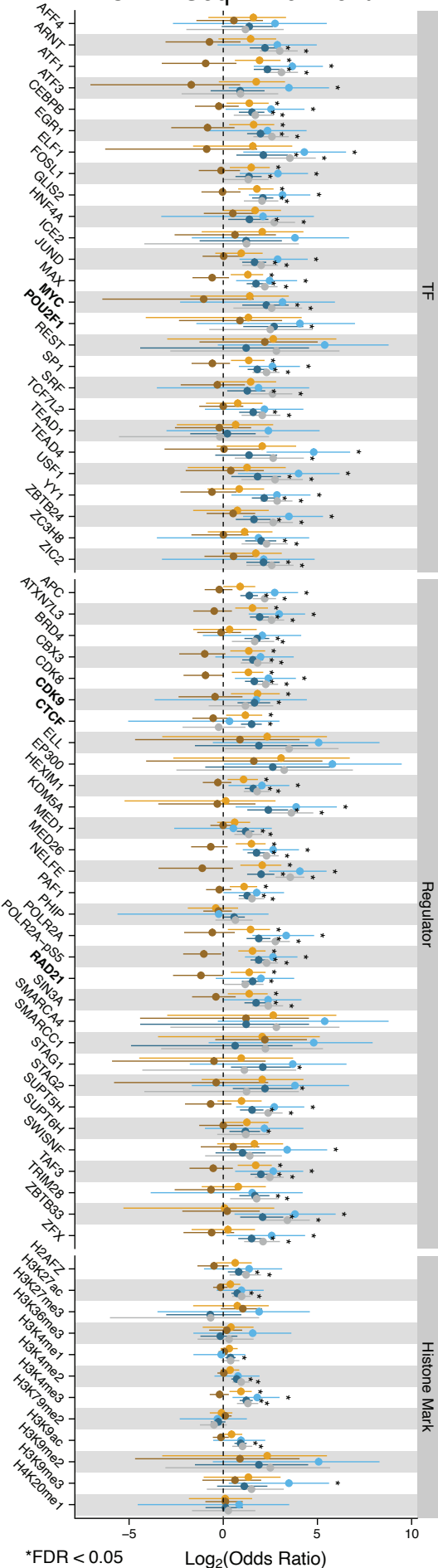
DCA Treatment Effect



FDR < 0.1 Shared Not Shared

Supp. Figure 8

a MPRA Fragment x ENCODE
ChIP-Seq Enrichment

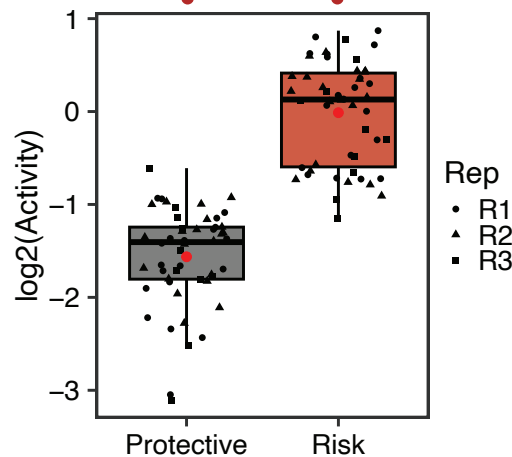


b

rs12814717

Primary Colon

FDR = 5.47×10^{-26}

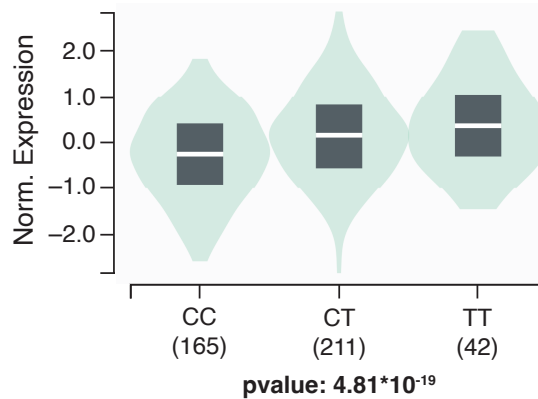


c

rs12814717 (GTEx eQTL)

ATF1

Colon (Sigmoid)

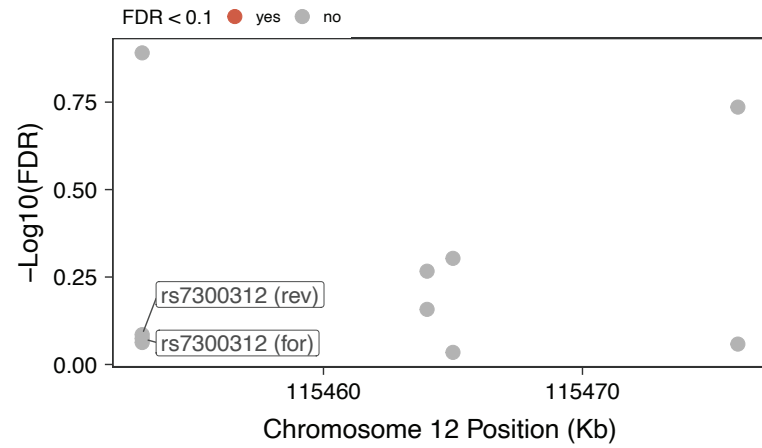


Supp. Figure 9

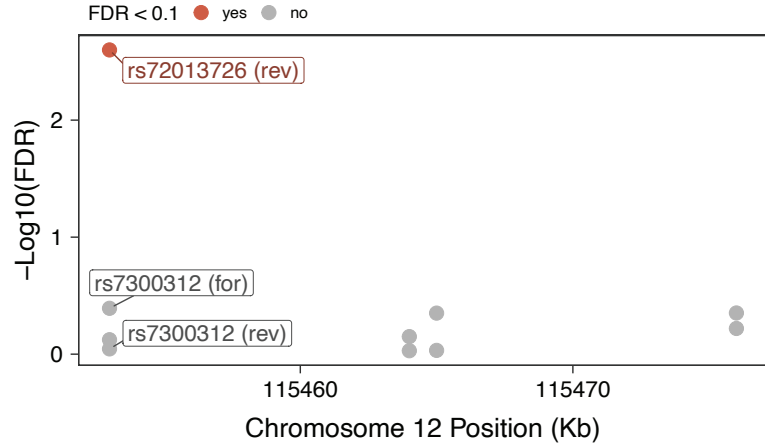
MED13L / TBX3 Locus (Tag SNP rs7300312)

a

Baseline Allelic Effects

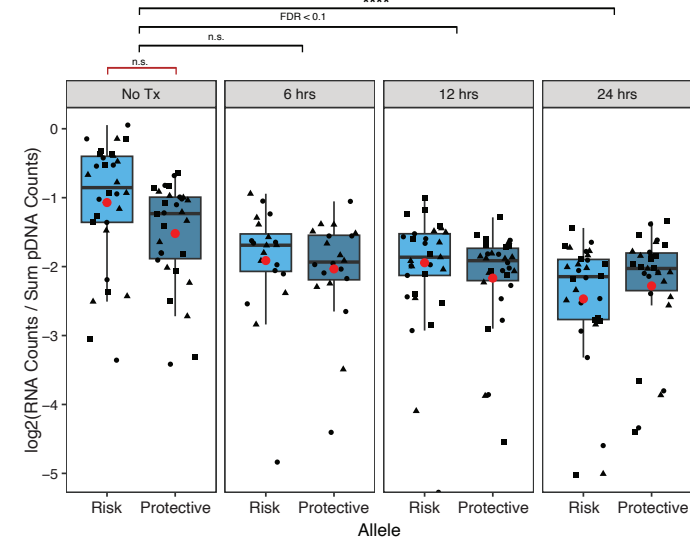


DCA Allelic Effects (24 hours)



b

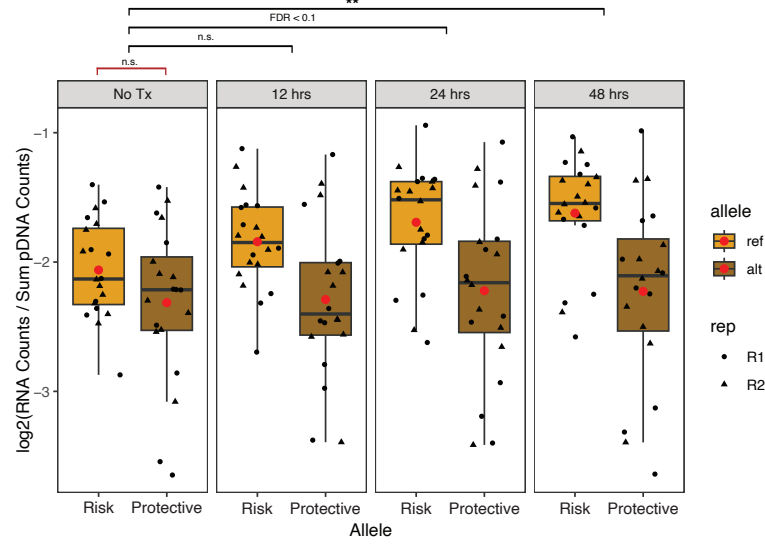
rs10411210 Butyrate - Primary Colon



Candidate Target Gene(s): RHPN2
Differentially expressed in RNA-Seq (upregulated); nearest gene;
nominated by GTEx

c

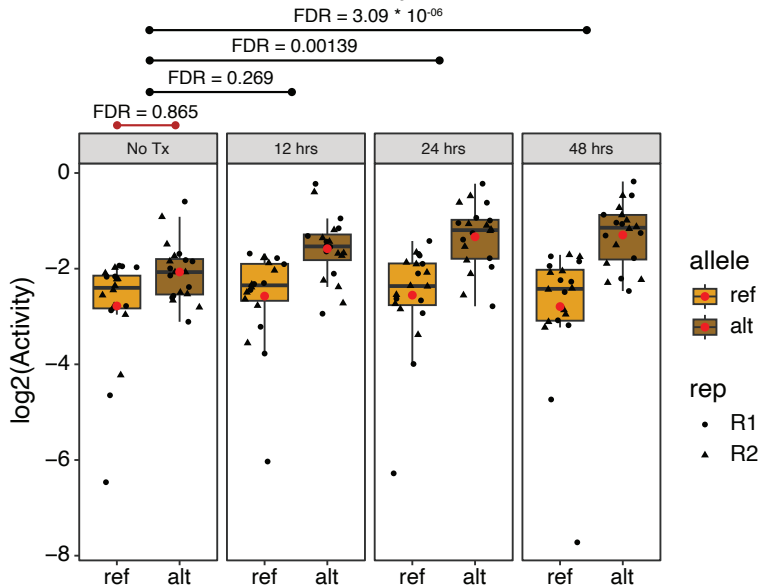
rs4608113 DCA (Primary Colon)



Candidate Target Gene(s): COLCA1*; COLCA2; C11orf53*
*Nearest gene; nominated by GTEx

d

rs72597431 DCA - Primary Colon



e

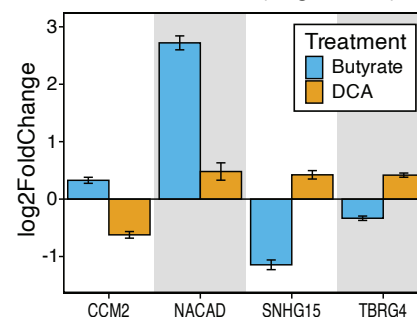
ATF1 Motif



f

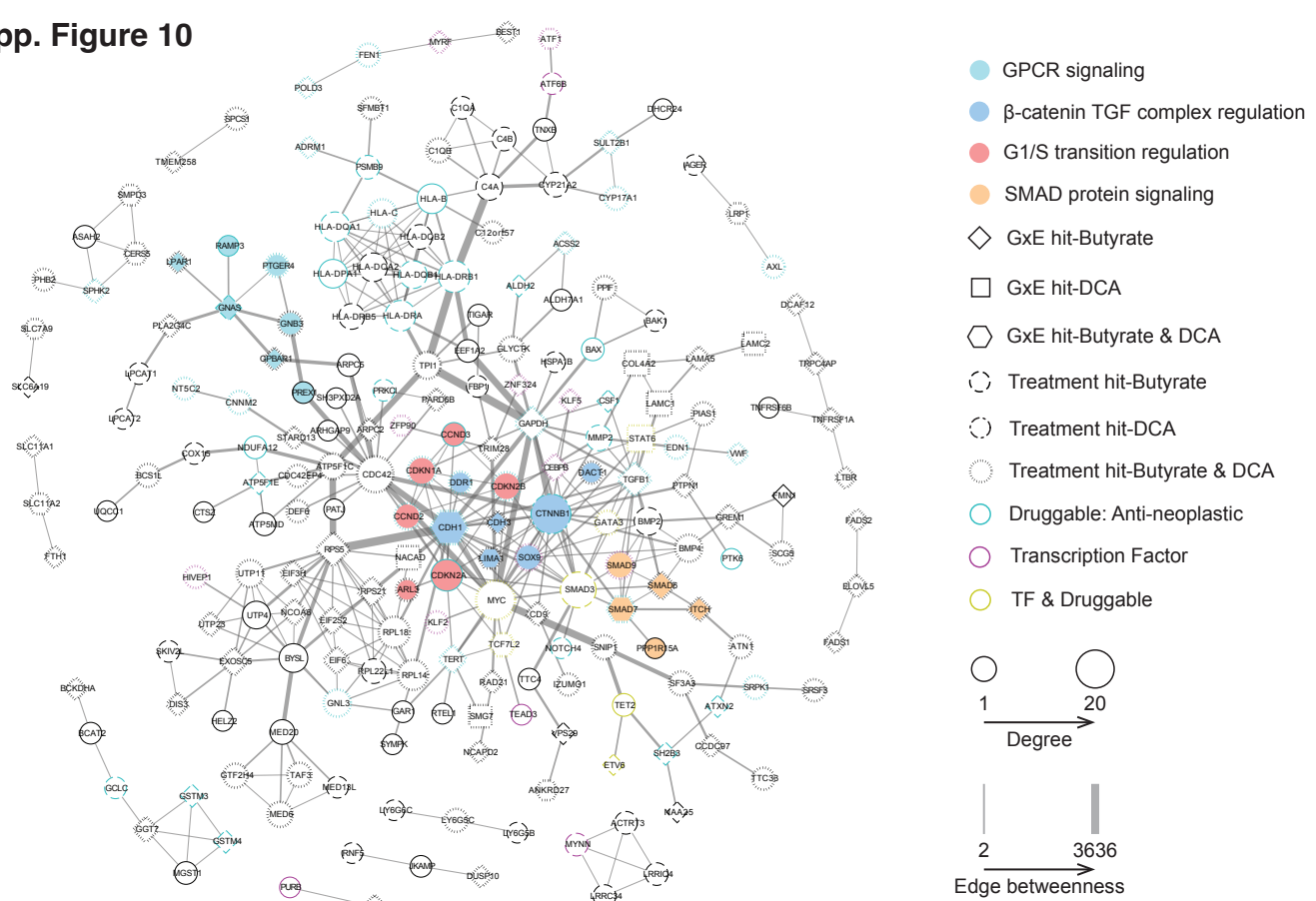
rs7259 Target Genes

Within 100 Kb (LogBM > 1)



Supp. Figure 10

a



b

