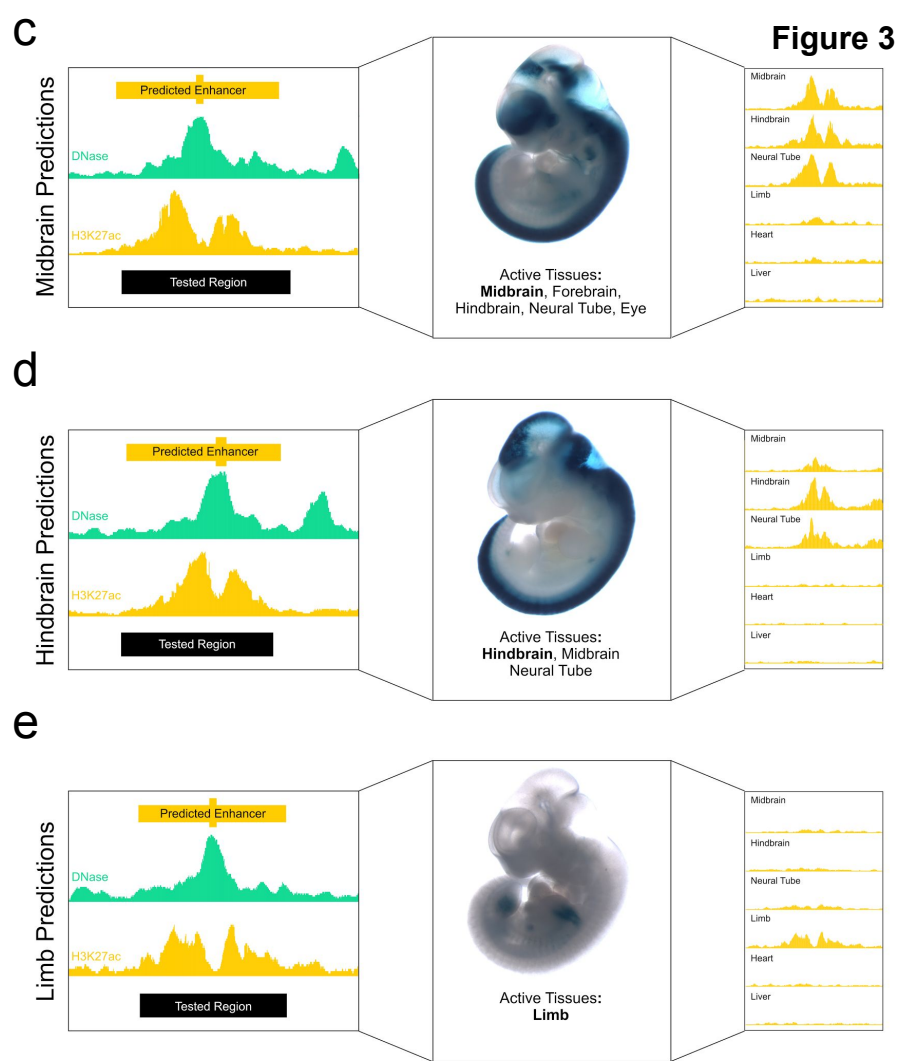
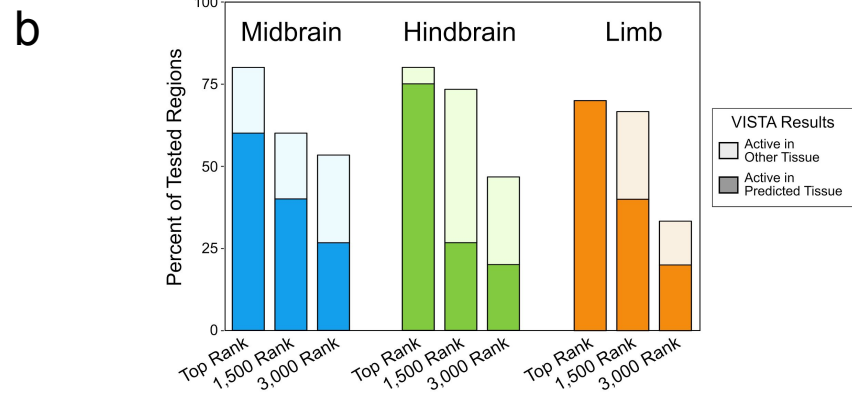
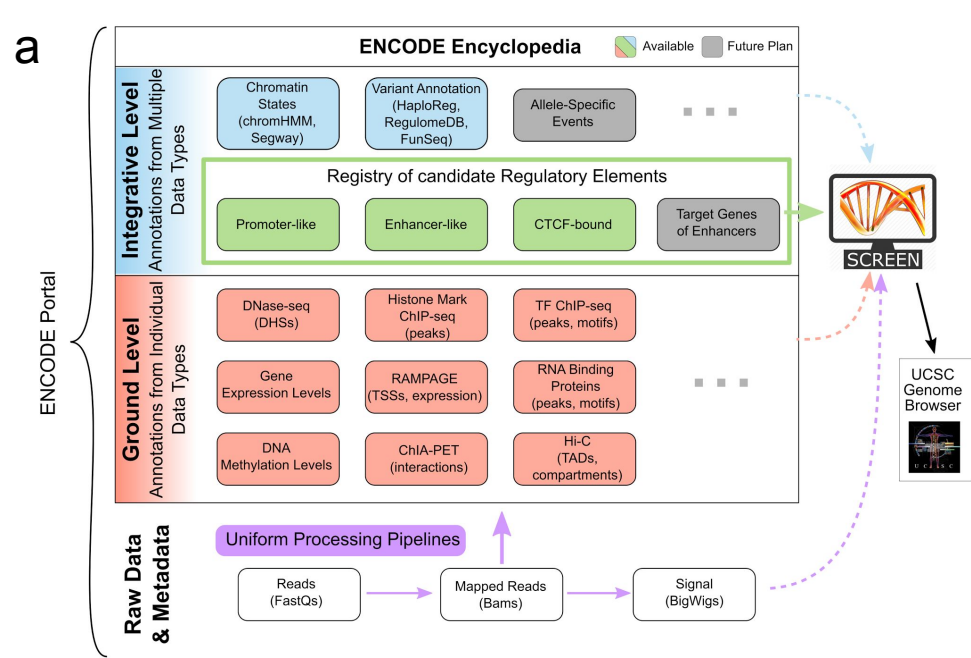
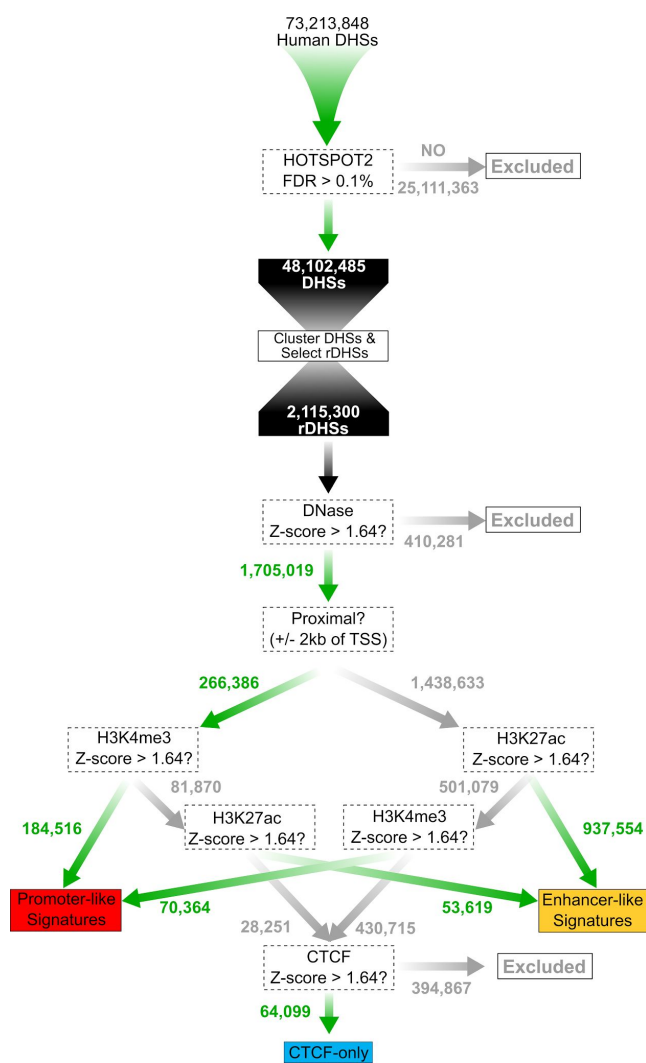


**Figure 2**



a



b

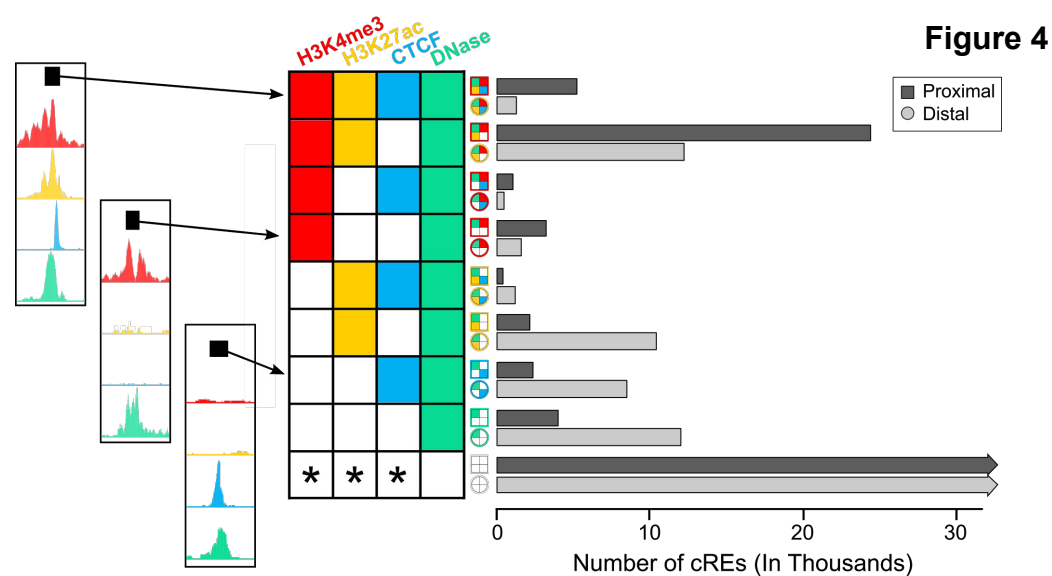
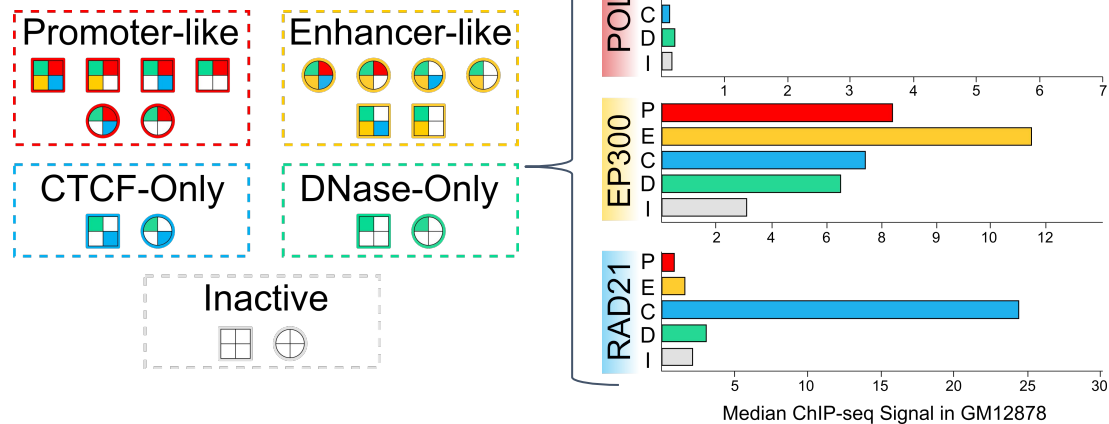


Figure 4

c

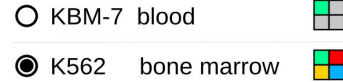


a. cRE-centric view

coordinates



cell type



search results

accession	K562	H3K4me3 Z	H3K27ac Z	CTCF Z	chr	start	length
<a href="#">EH37E1091086</a> ★P		3.65	0.36	0.08	chr11	13,298,849	607
<a href="#">EH37E0008150</a> ★D		0.43	0.64	4.20	chr11	5,012,277	370

cRE details

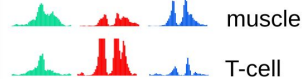
Genes within TAD

symbol  
[AC025300.1](#)  
[AC084859.1](#)  
[ARNTL](#)  
[BTBD10](#)

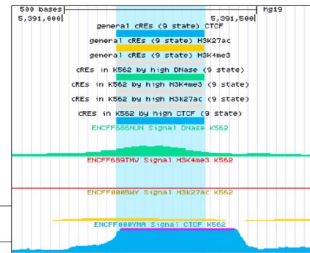
TFs that bind this cRE

factor	#experiments
<a href="#">POLR2A</a>	36
<a href="#">EZH2</a>	
<a href="#">SP1</a>	

Signal Profile



UCSC genome browser

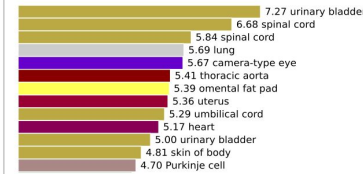


b. gene-centric view

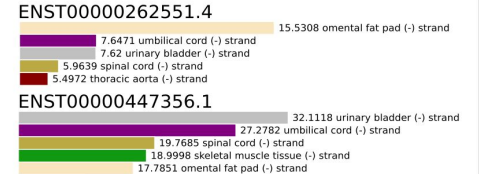
accession	chr	start	nearest genes
<a href="#">EH37E1299175</a> ★P	chr9	95,165,162	pc: <a href="#">OGN</a> , <a href="#">OMD</a> , <a href="#">NOL8</a> all: <a href="#">OGN</a> , <a href="#">OMD</a> , <a href="#">NOL8</a>

OGN expression

RNA-seq



RAMPAGE

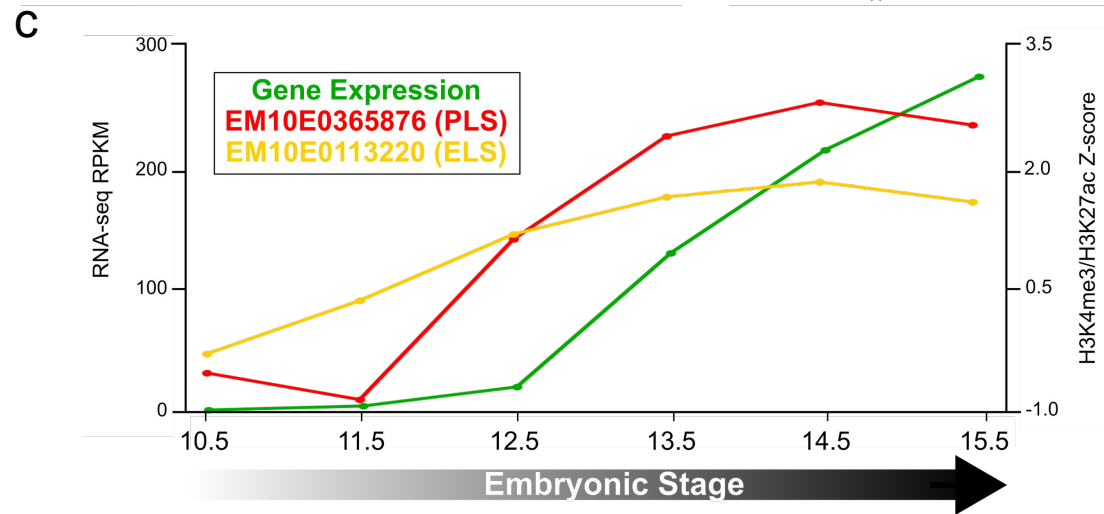
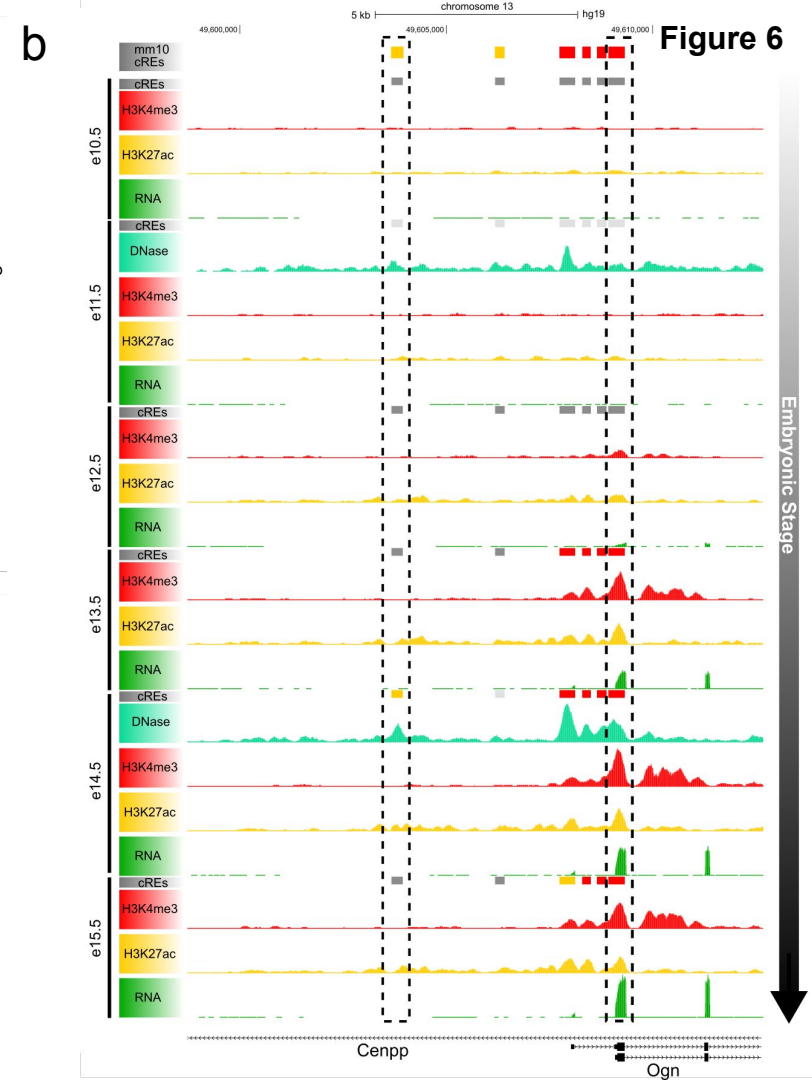
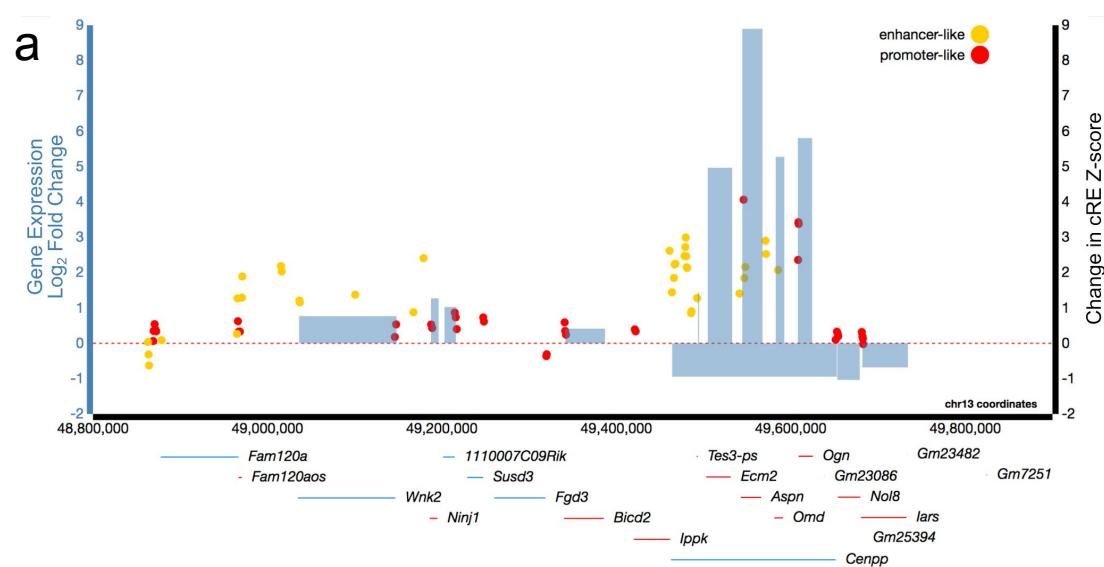


c. SNP-centric view

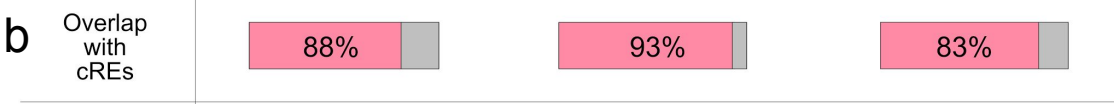
inflammatory bowel disease GWAS

#of LD blocks overlapping cREs	#of overlapping cREs	cell type	P
106 (97%)	1205	T-cell male adult (37 years)	3.1e-17
		CD4-positive helper T-cell	2.2e-16

accession	CD4-positive helper T-cell	SNPs
<a href="#">EH37E1211040</a> ★P		<a href="#">rs11089620</a>
<a href="#">EH37E1269563</a> ★P		<a href="#">rs12212247</a>



**a** Select GWAS Multiple Sclerosis (2 Studies) Patsopoulos *et al.* (2011) Sawcer *et al.* (2011) QT Interval Arking *et al.* (2014) LDL Cholesterol Levels Surakka *et al.* (2015)



**c** Suggested Cell & Tissue Types

Cell Type	FDR	Cell Type	FDR	Cell Type	FDR
OCI-LY3 (B cell lymphoma)	3.0e-10	Heart, Right Atrium	4.3E-3	Liver	3.0E-3
T helper cells (PMA-I stimulated)	3.1e-09	Heart, Right Ventricle	0.01	Right Lobe Liver	4.6E-3
....	....	Rectal Smooth Muscle	0.04	HepG2	0.03
T helper 17 cells (PMA-I stimulated)	2.6e-07	Cardiac Muscle Cell	0.04	Small Intestine	0.16
GM12878	2.6e-07	Ectodermal Cell	0.14	Large Intestine	1

**d** Select Specific Cell or Tissue Type

cREs Active in GM12878 **59%**

Other cREs | Promoter-like | Enhancer-like

SNP	cRE	Promoter Score	Gene
rs11554159	EH37E1172859	5.31	IFI30
rs4810485	EH37E1203863	4.98	CD40
rs2251795	EH37E1228818	4.77	MYNN
rs210962	EH37E1267261	4.74	MYB
rs3904600	EH37E1257824	4.73	RREB1

SNP	cRE	H3K27ac Z-score
rs1250566	EH37E0182316	4.08
rs1250568	EH37E0182314	4.08
rs17066063, rs72975618	EH37E0869042	3.92
rs194747	EH37E0342396	3.84
rs354041, rs354042, rs354043	EH37E0934171	3.76

