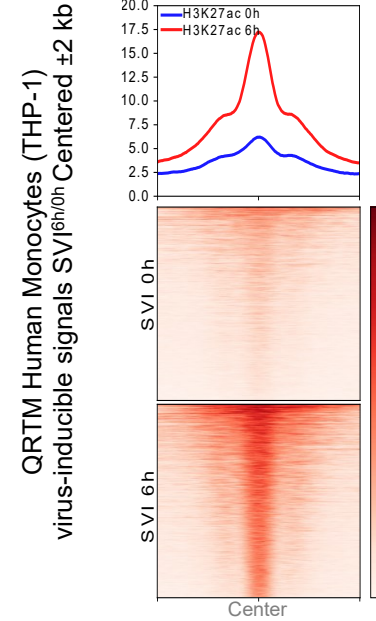
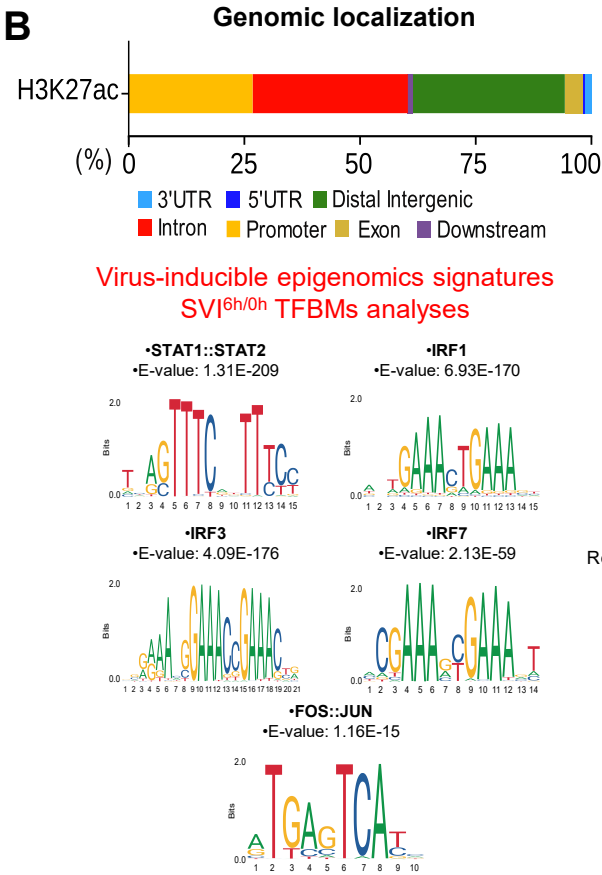


GitHub Figure 1

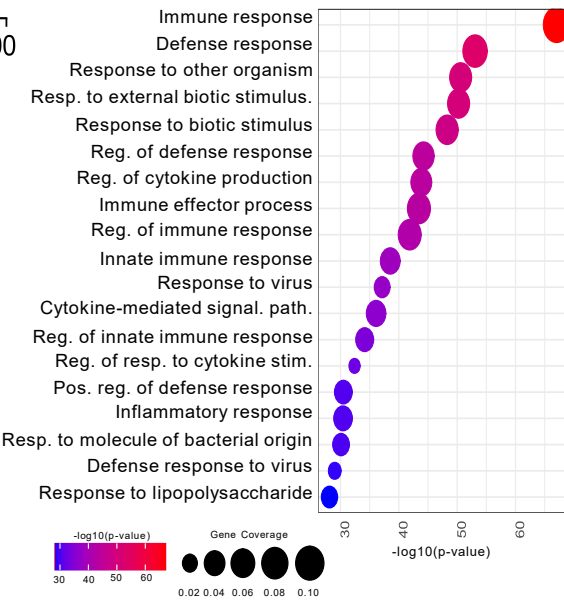
A



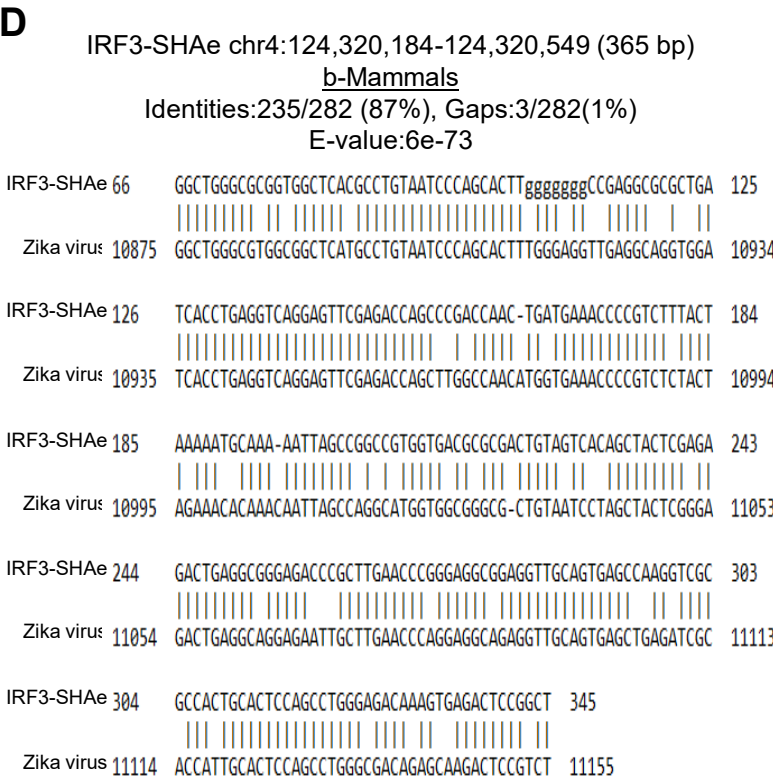
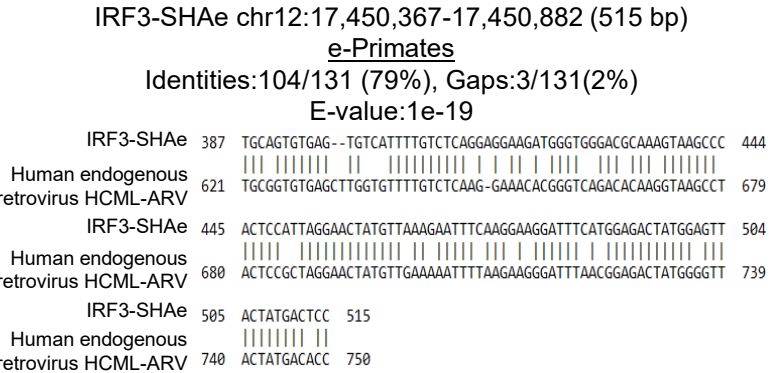
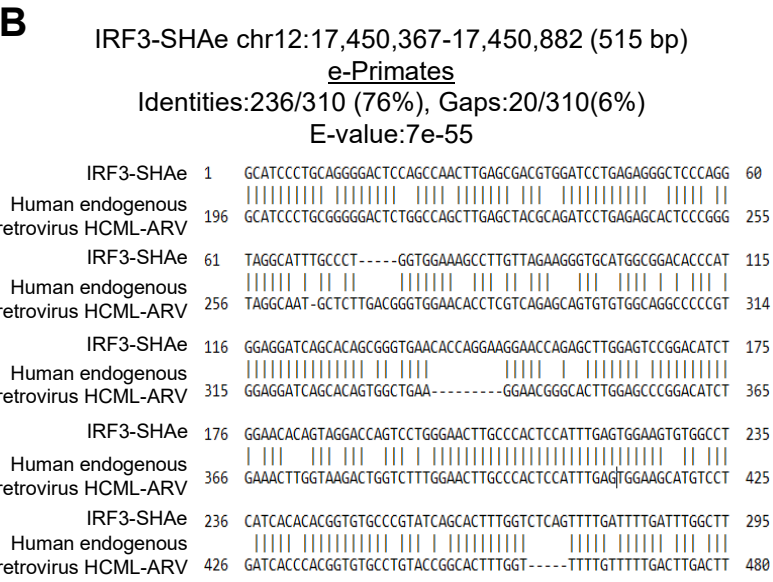
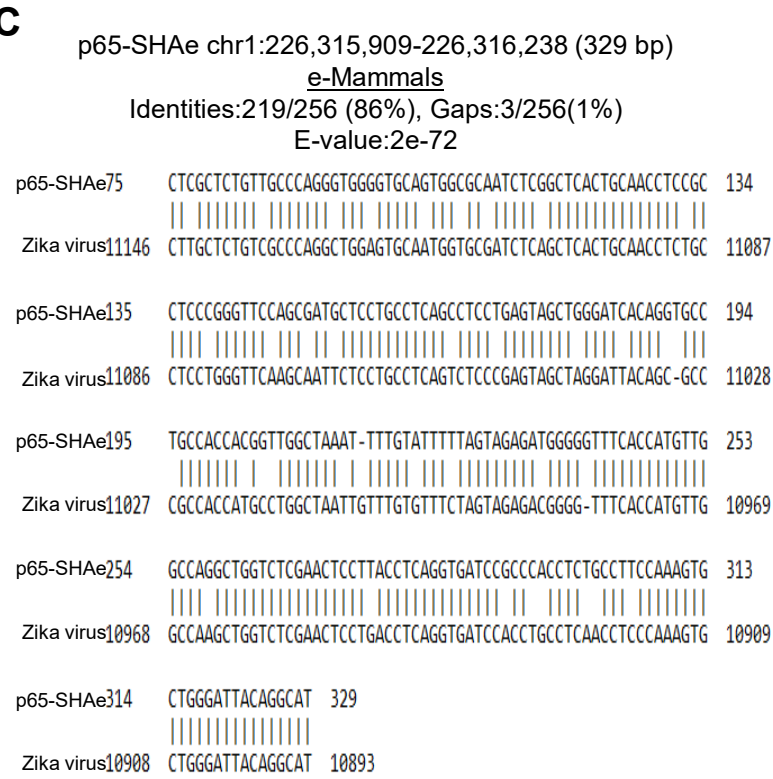
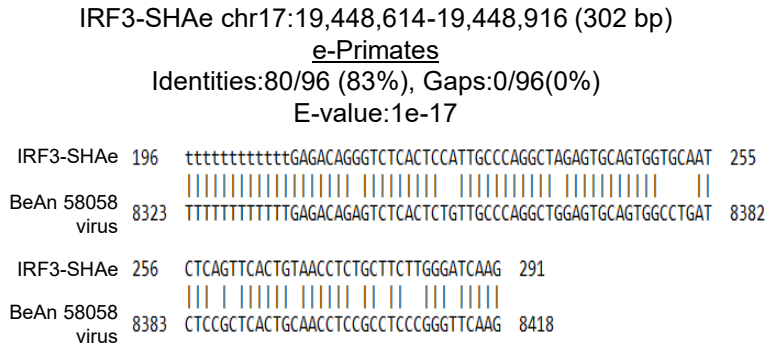
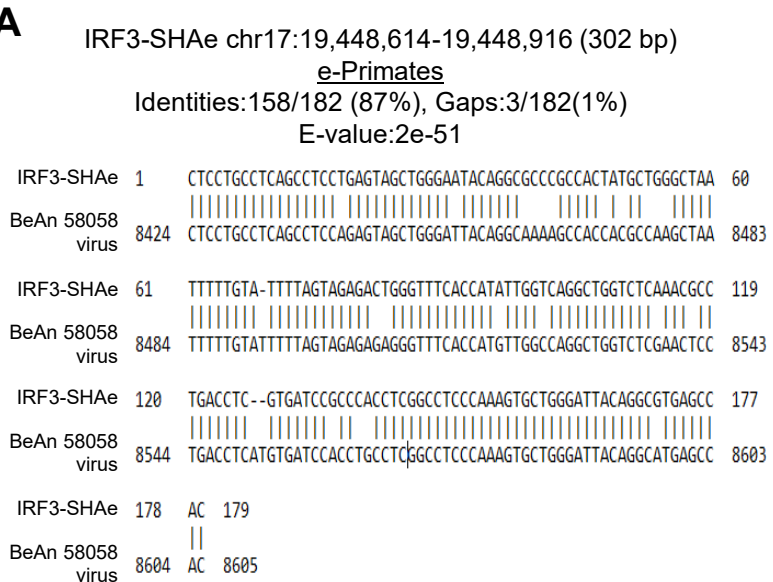
B



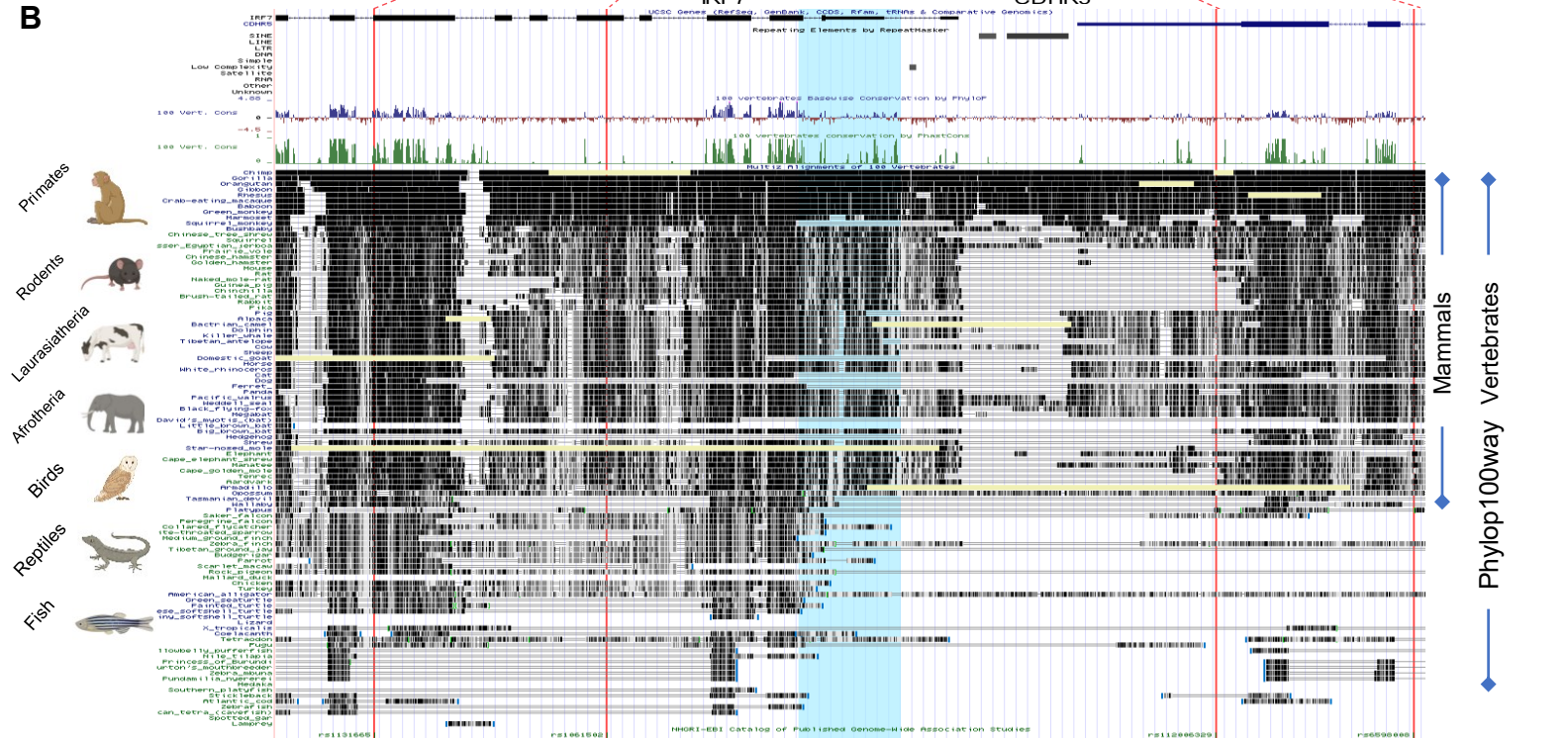
Biological Processes (GOs)



GitHub Figure 2



B

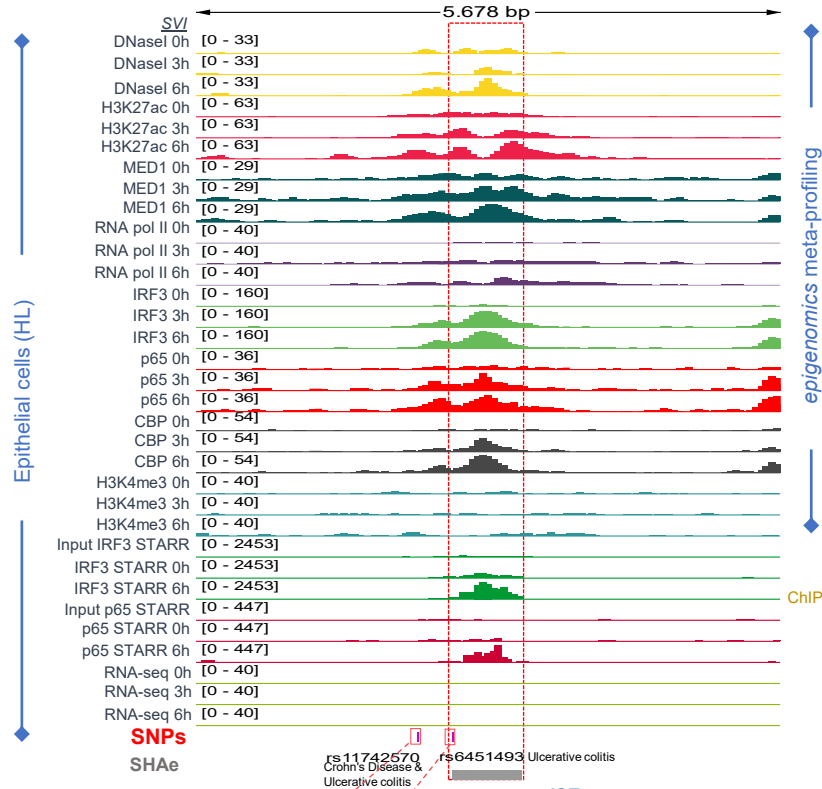


RS ID	rs1131665	rs1061502	rs112006329	rs6598008
rs1131665	1	1	1	0.464
rs1061502	1	1	1	0.464
rs112006329	1	1	1	0.464
rs6598008	0.464	0.464	0.464	1

chr5:40,408,427-40,414,103

```

graph TD
    A[SHAe extension ±2.5 kb] --> B[SNPs Mapping]
    B --> C[Hyper-Atlas-Screening]
    C --> D[Monitoring of SNPs/SHAe Evolutionary History]
    D --> E[Squared Correlation (R²) of Linkage disequilibrium (LD)]
  
```

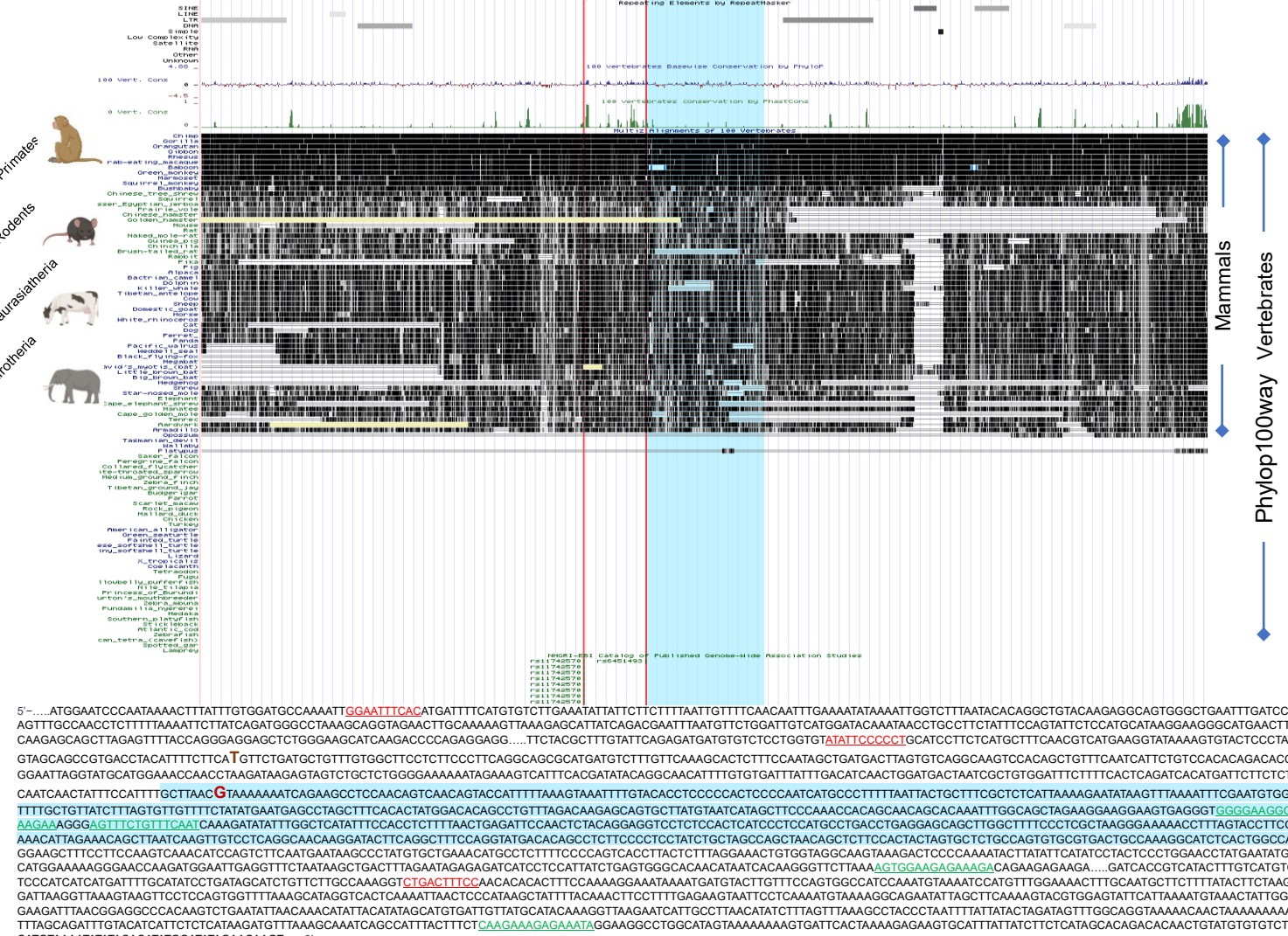


SNP linked to Human Autoimmune Diseases

rs11742570 Crohn's Disease & Ulcerative colitis

rs6451493 Ulcerative colitis

- ChIP-STARR-seq



PhyloP100way Mammals

RS ID	rs11742570	rs6451493
rs11742570	1	1
rs6451493	1	1

chr9:4,984,079-4,989,381 *JAK2* locus

```

graph TD
    A[SHAe extension ±2.5 kb] --> B[SNPs Mapping]
    B --> C[Hyper-Atlas-Screening]
    C --> D[Monitoring of SNPs/SHAe Evolutionary History]
    D --> E[Squared Correlation (R²) of Linkage disequilibrium (LD)]
  
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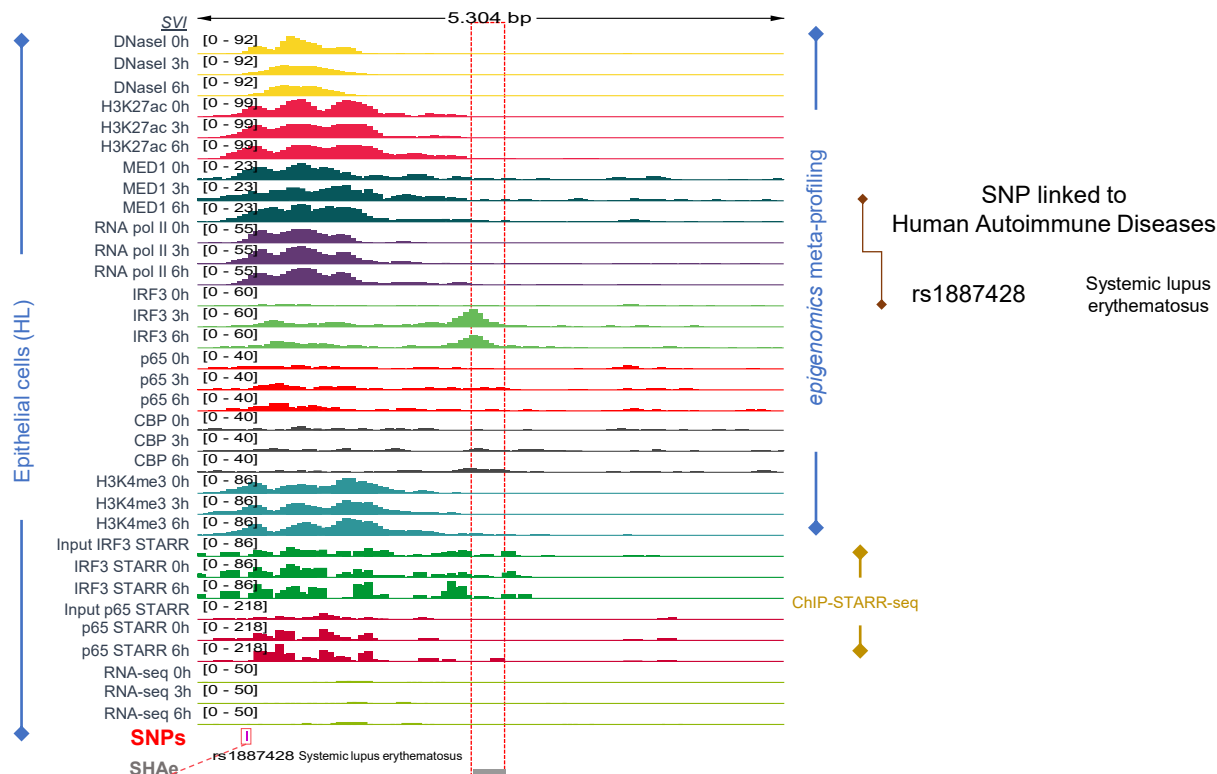
SHAe extension ± 2.5 kb

SNPs Mapping

Hyper-Atlas-Screening

Monitoring of SNPs/SHAe Evolutionary History

Squared Correlation (R^2) of Linkage disequilibrium (LD)

[illegible]

