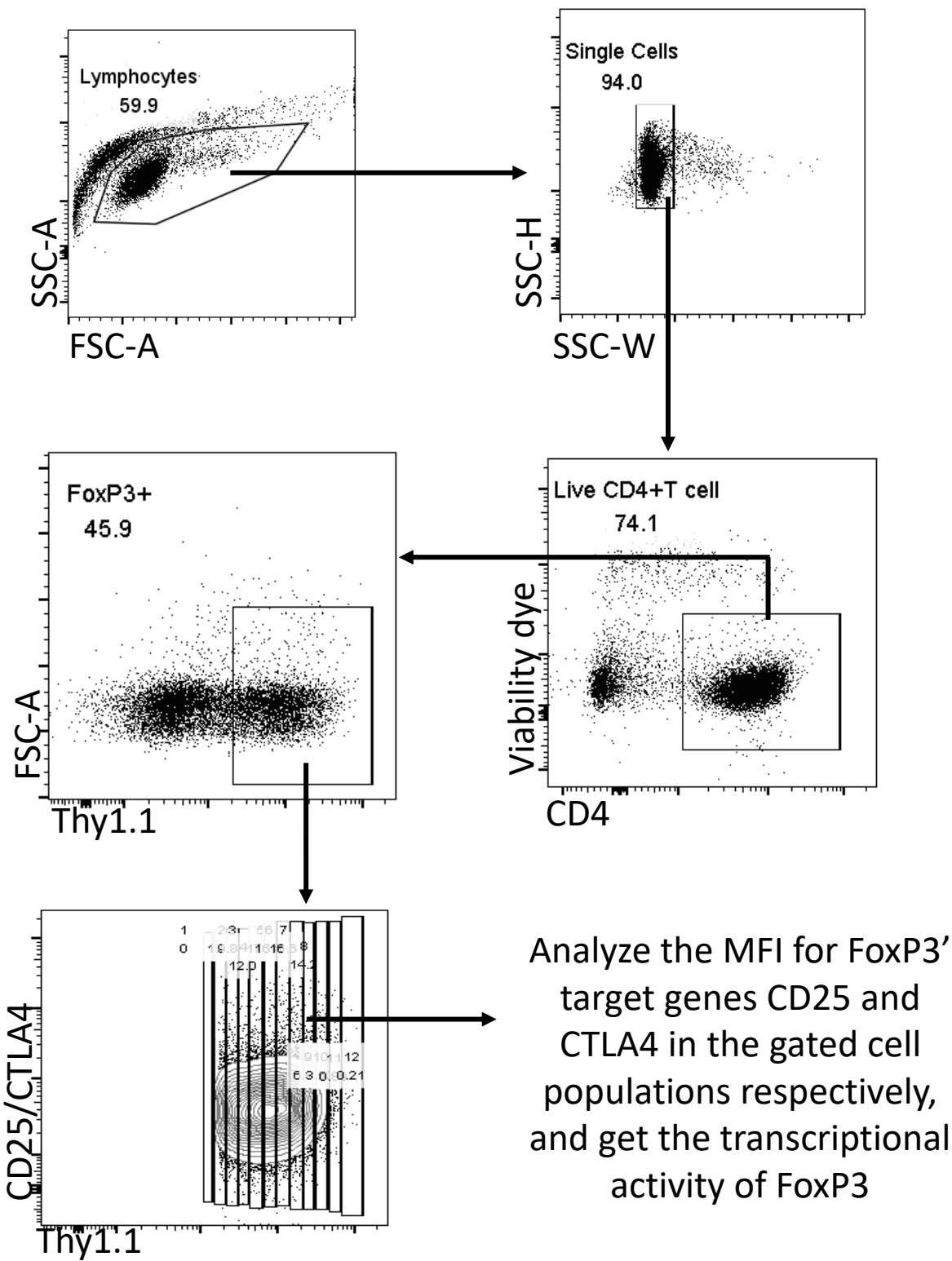## Supplementary information

FOXP3 recognizes microsatellites and bridges DNA through multimerization

In the format provided by the
authors and unedited
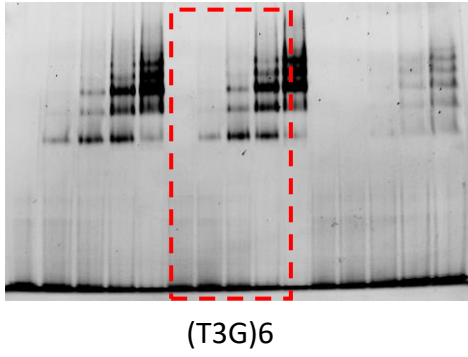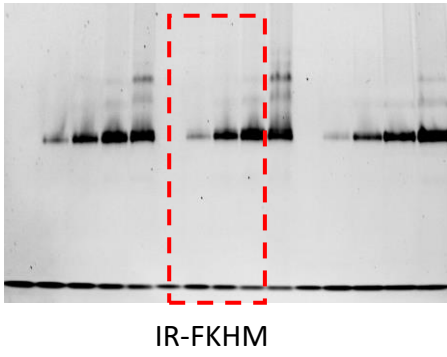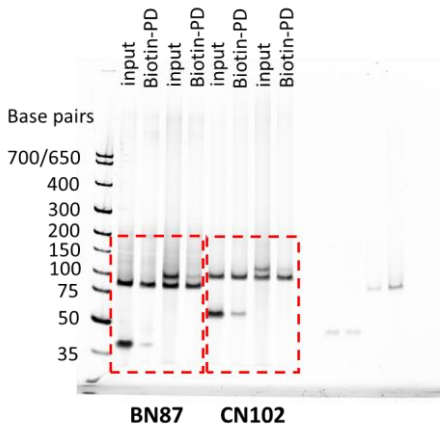
Supplementary Figure 1

Gating strategies for FACS analysis

Supplementary Figure 2

For Figure 1

Used in Figure 1c. Right panel.
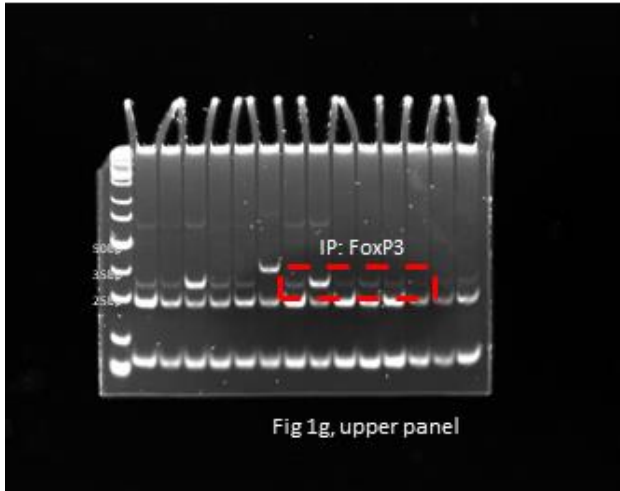
IR-FKHM

(T3G)6

Used in Figure 1i

Fig 1h, upper panel

Fig 1f, upper panel

Fig 1f, lower panel

Fig 1h, lower panel

Used in Figure 1f and 1h

Fig 1g, upper panel

Fig 1g, lower panel
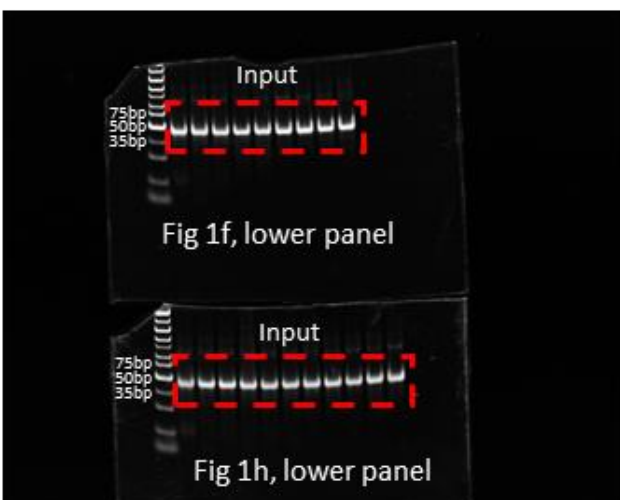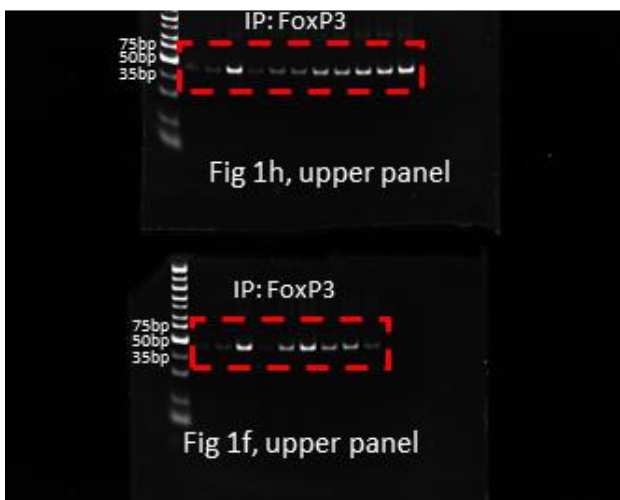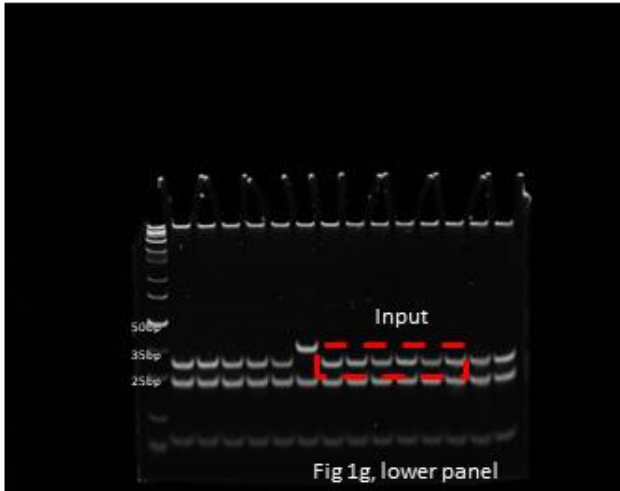
Used in Figure 1g

For Figure 2 and Figure 3
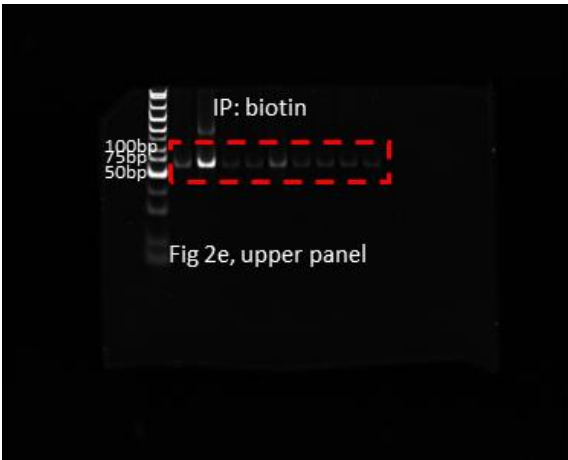
Used in Figure 2e

Used in Figure 3b

Used in Figure 3c, upper panel

Used in Figure 3c, middle panel

Used in Figure 3c, bottom panel

For Figure 4

Used in Figure 4b

Used in Figure 4c

Used in Figure 4d

For Figure 4
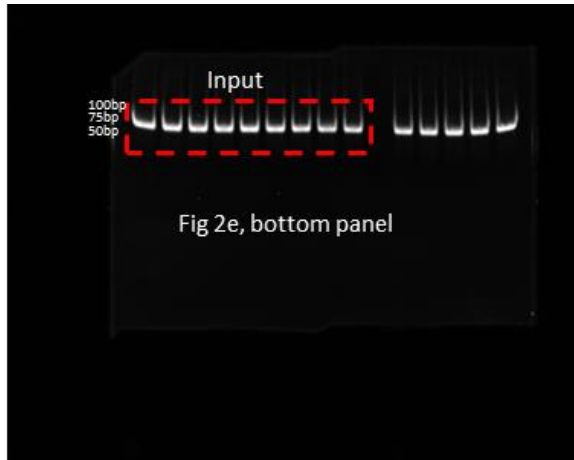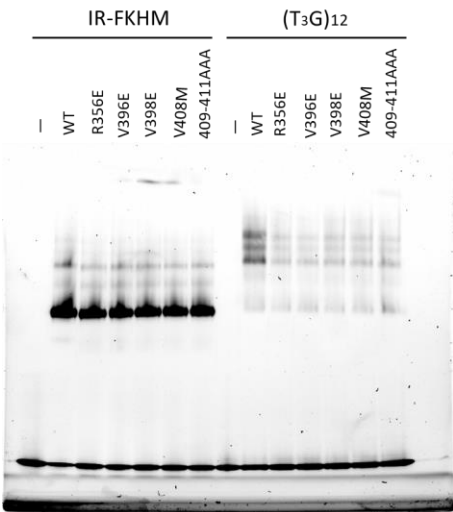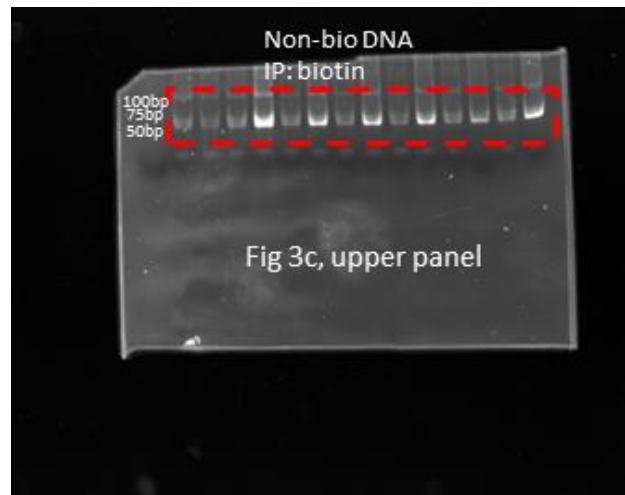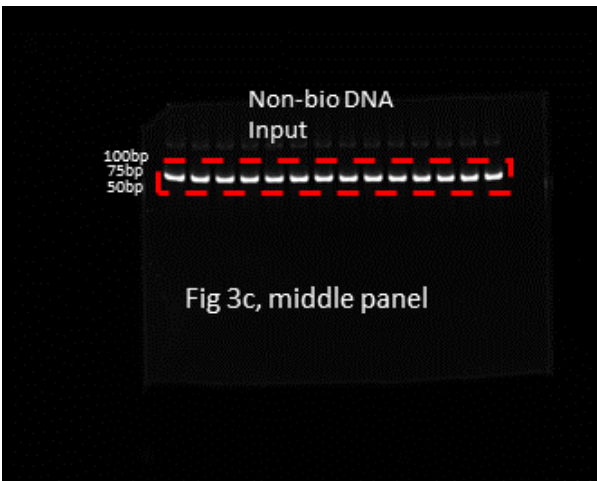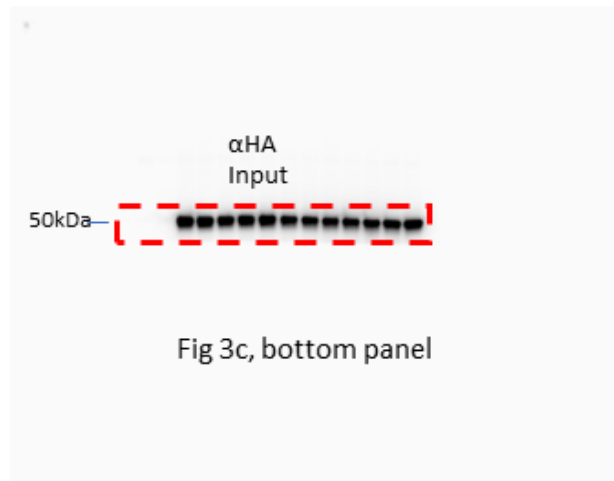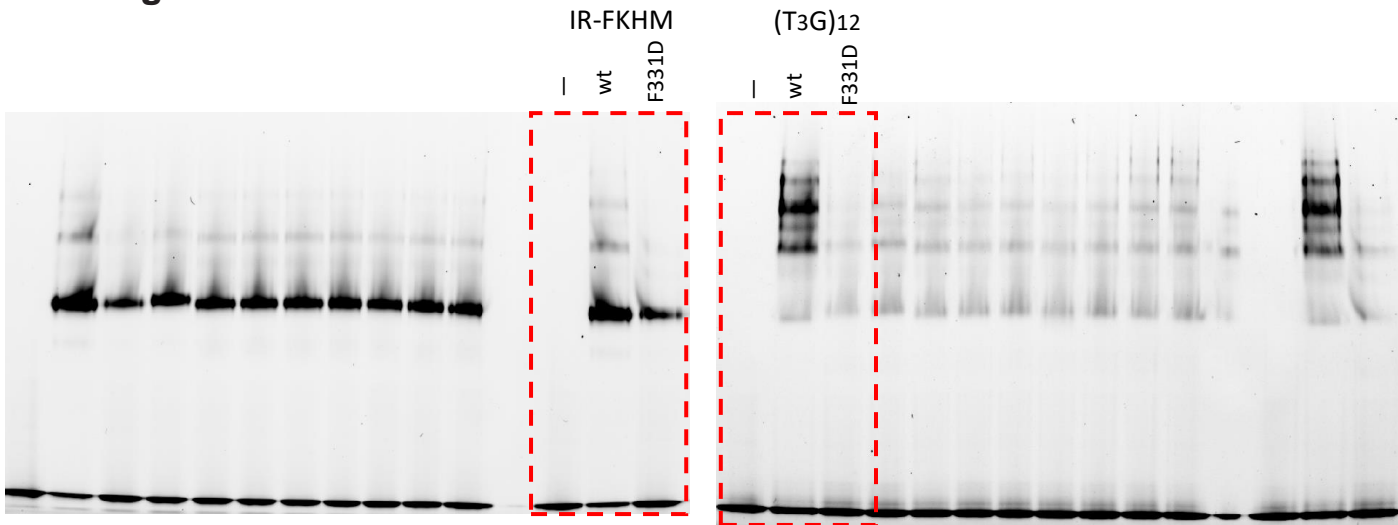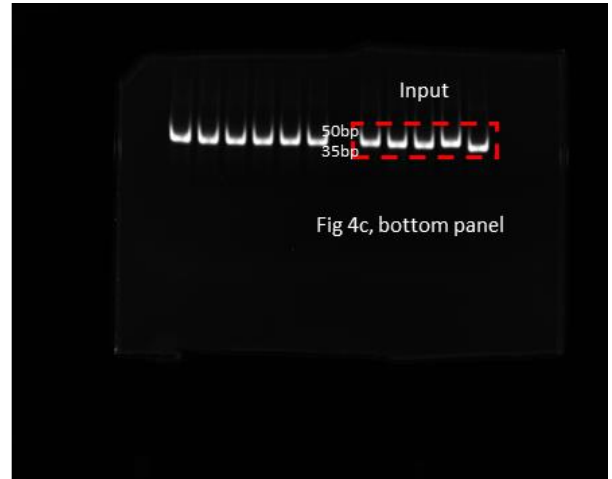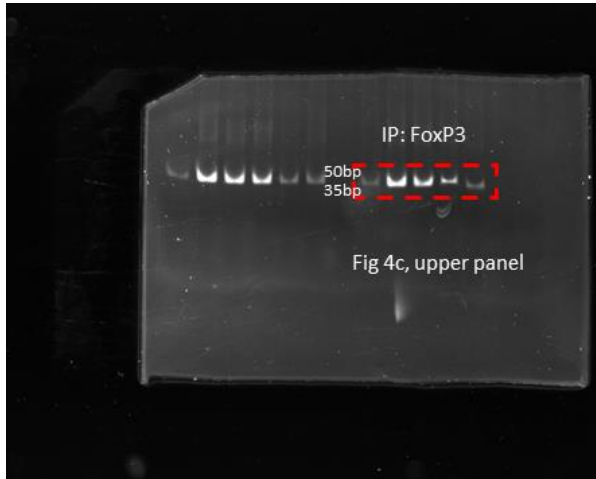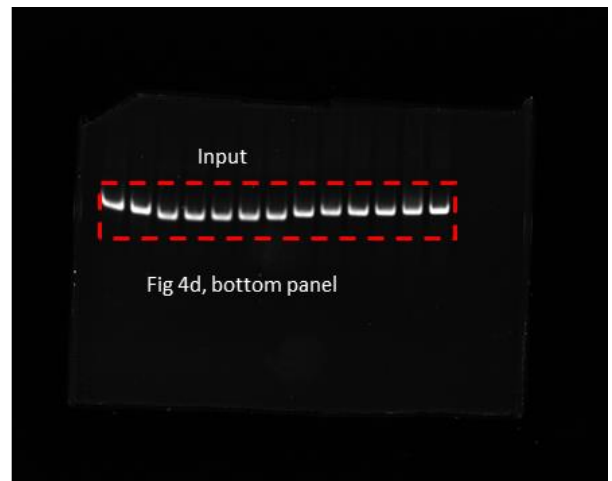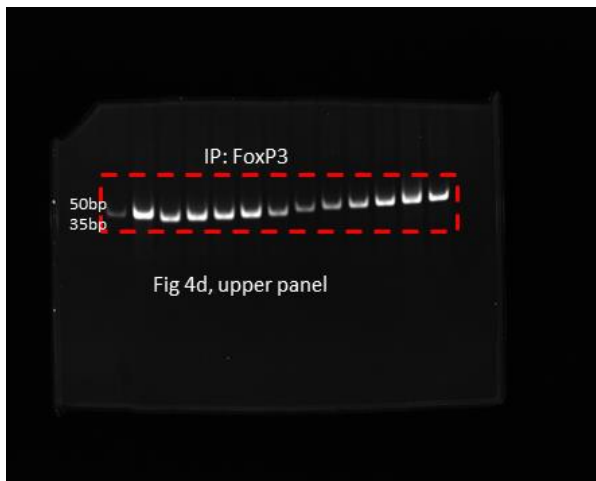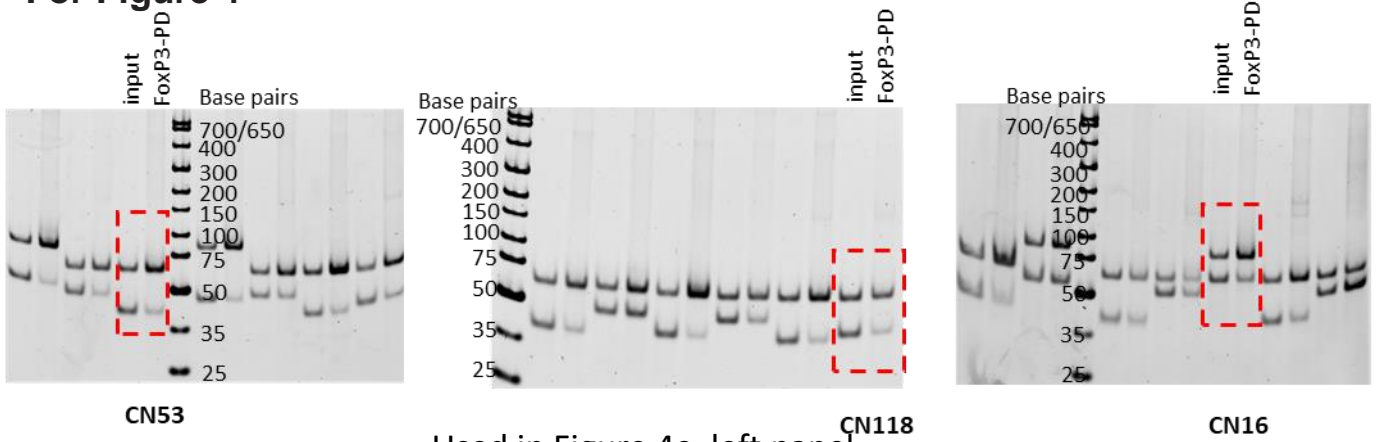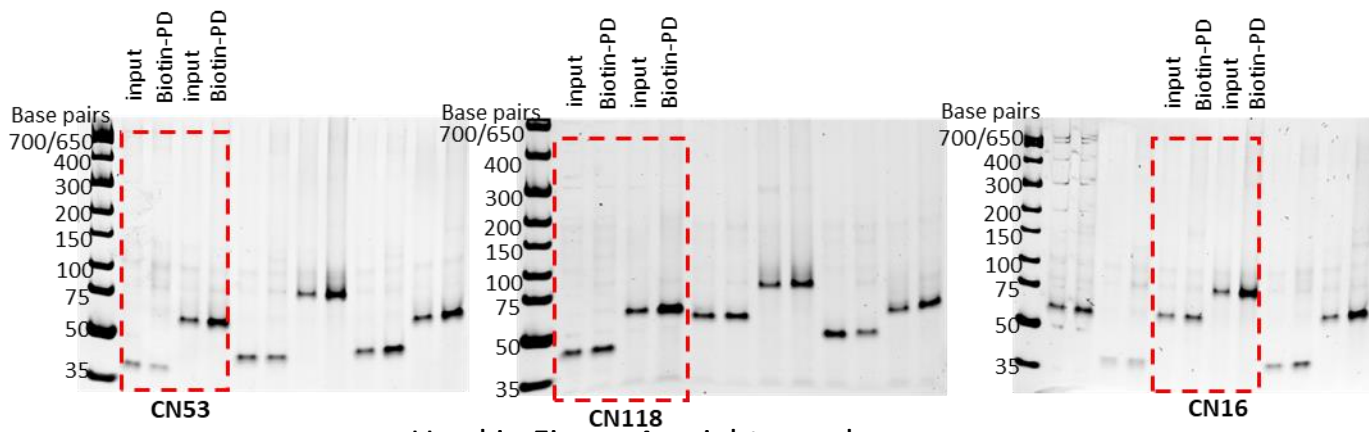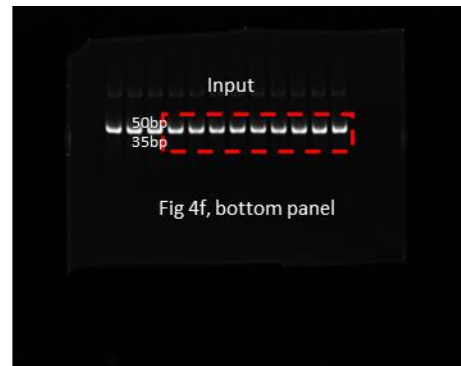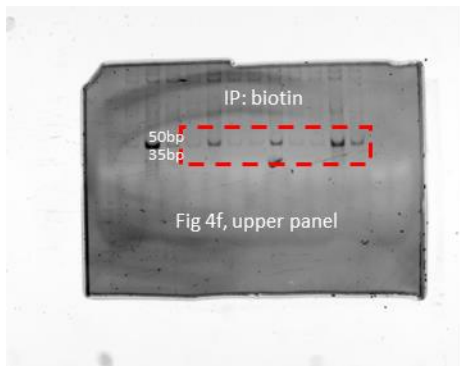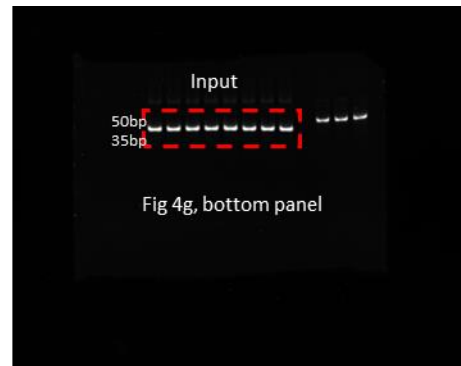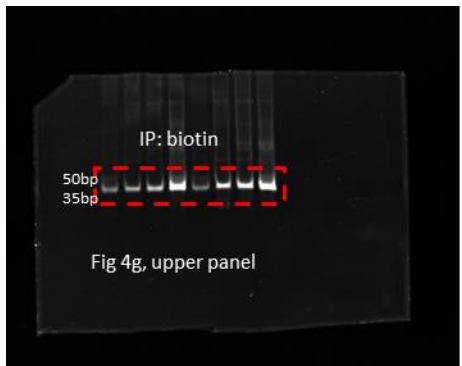

Used in Figure 4e, left panel

Used in Figure 4e, right panel

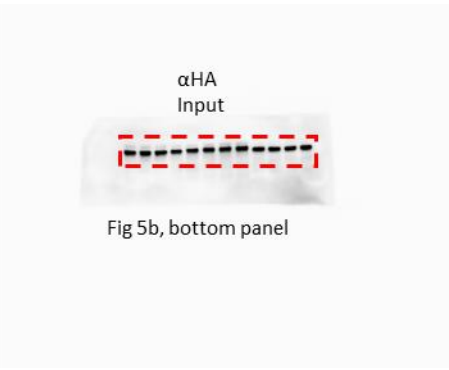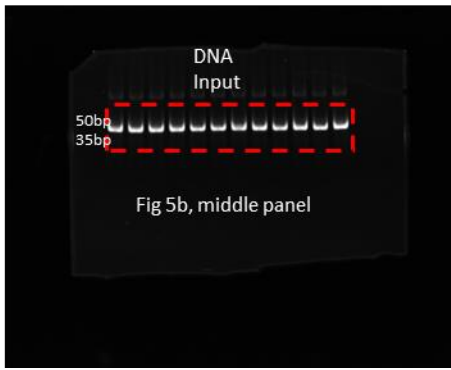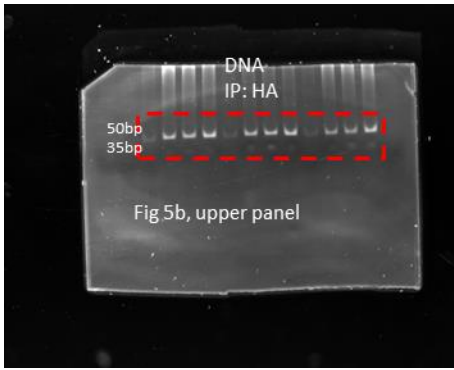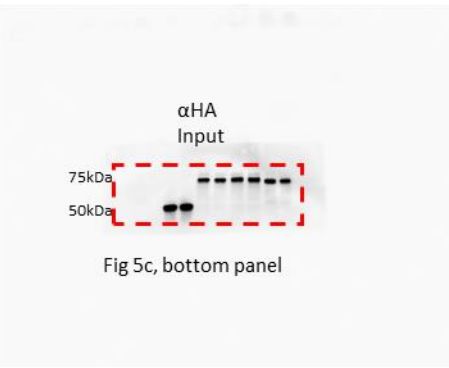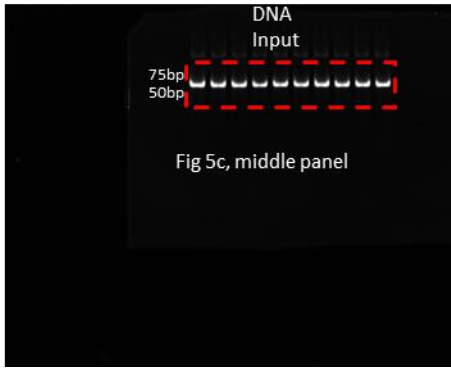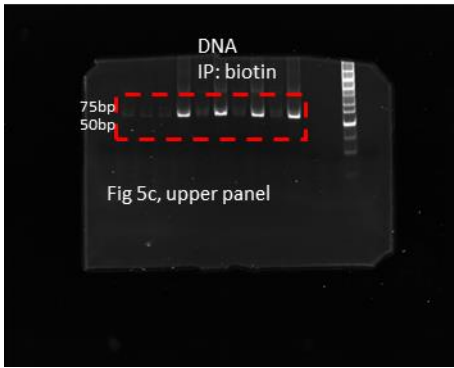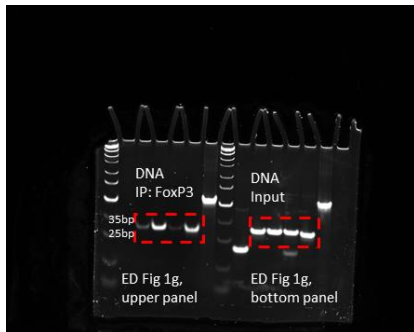Used in Figure 4f

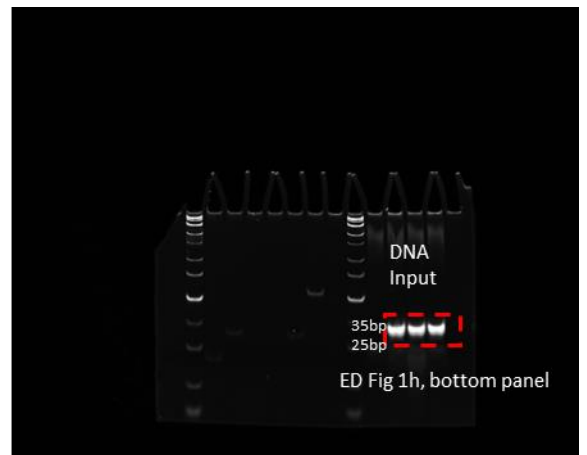
Used in Figure 4g

For Figure 5 and ED Figure 1

Used in Figure 5b

Used in Figure 5c

Used in ED Figure 1g

Used in ED Figure 1h

For ED Figure 1

Used in ED Figure 1i

Used in ED Figure 1j

Used in ED Figure 1k

For ED Figure 2 and 3

Used in ED Figure 2h

Used in ED Figure 3b

For ED Figure 3

DNA
IP: FoxP3

50bp
35bp

ED Fig 3c, upper panel

DNA
Input

50bp
35bp

ED Fig 3c, bottom panel

Used in ED Figure 3c

DNA
PD: biotin

75bp
50bp

ED Fig 3e, upper panel

DNA
Input

75bp
50bp

ED Fig 3e, bottom panel

Used in ED Figure 3e

DNA
PD: biotin

75bp
50bp

ED Fig 3f, upper panel

DNA
Input

75bp
50bp

ED Fig 3f, bottom panel

Used in ED Figure 3f

For ED Figure 5

αHA

50kDa

ED Fig 5d, upper panel

αVinculin

ED Fig 5d, bottom panel

Used in ED Figure 5d

NFAT − + − + − + − + − + − + − +

FoxP3   none   WT   R356E   V396E   V398E   V408M   409-411AAA
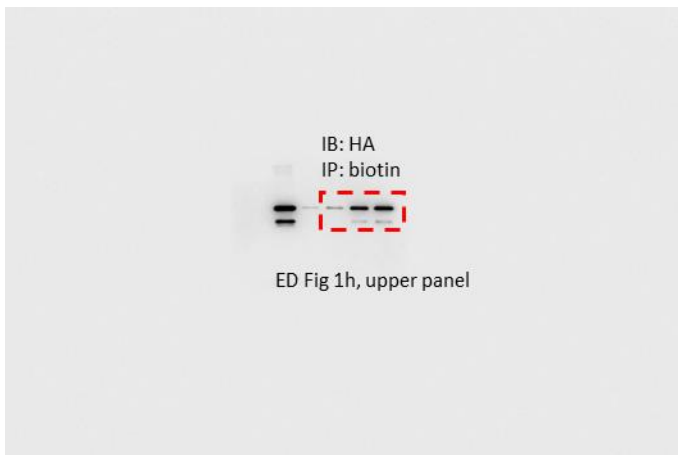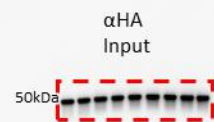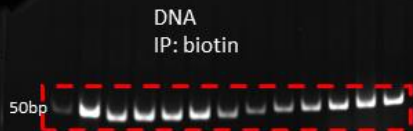
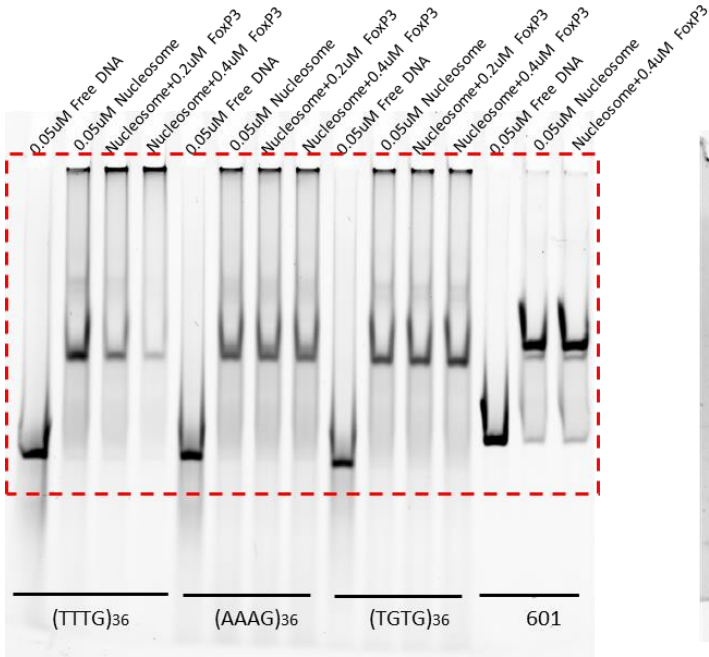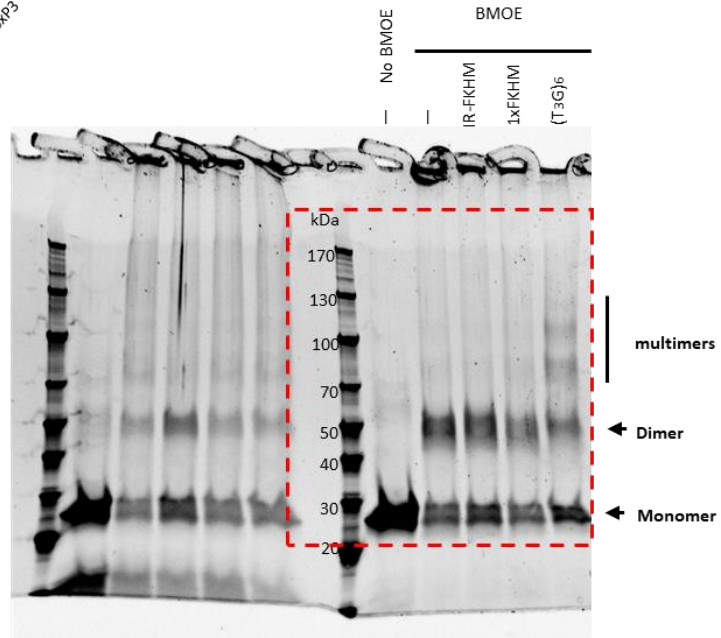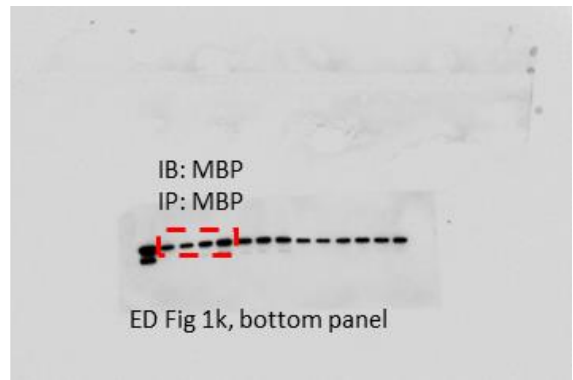Used in ED Figure 5e

For ED Figure 6
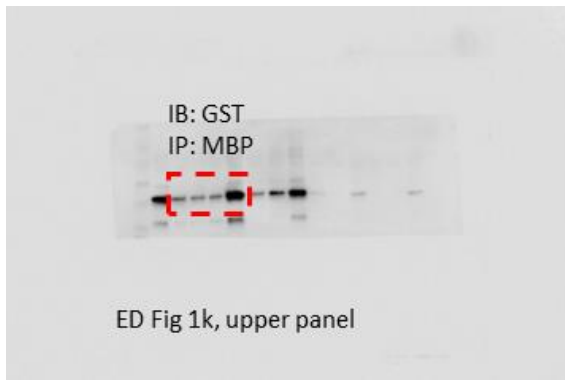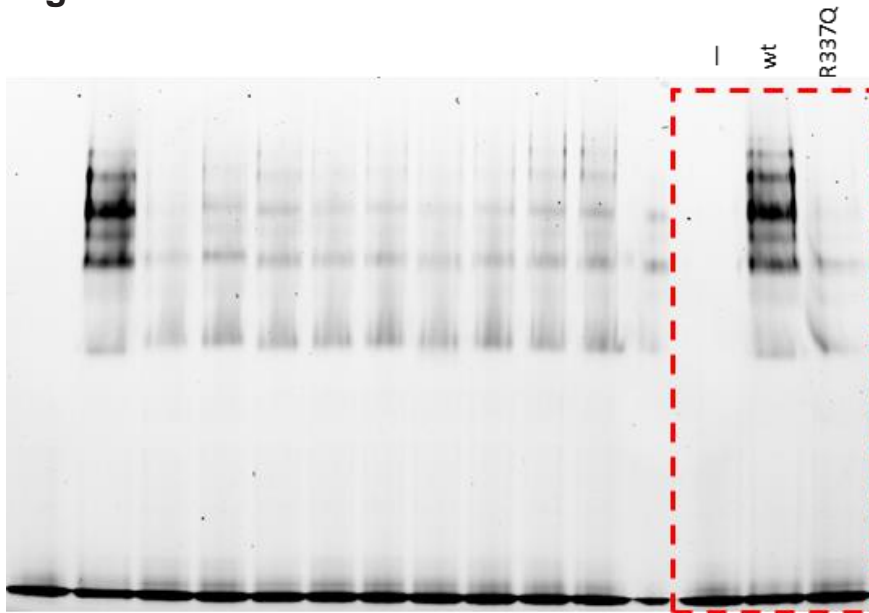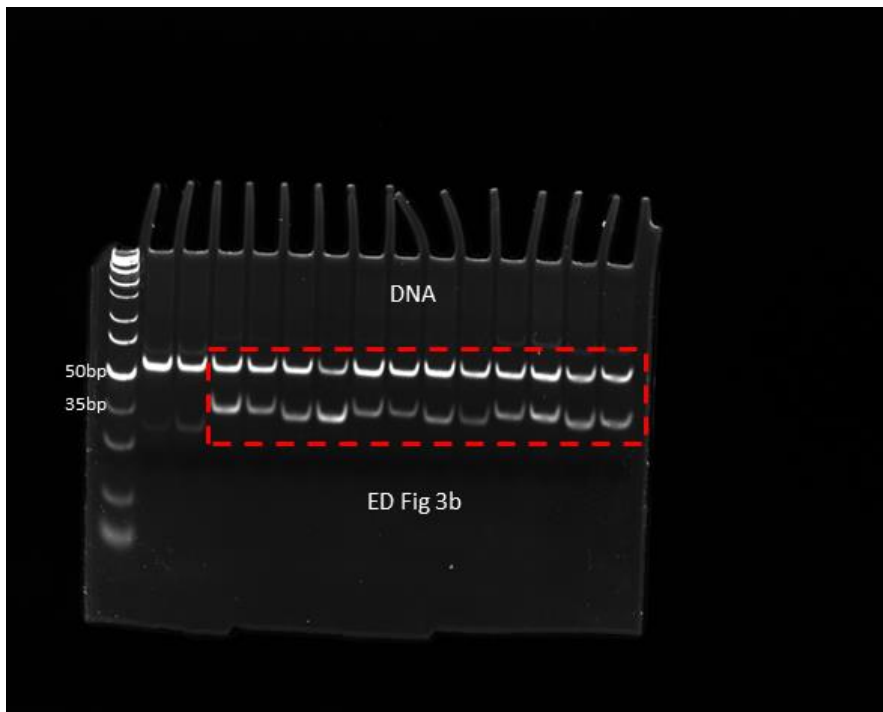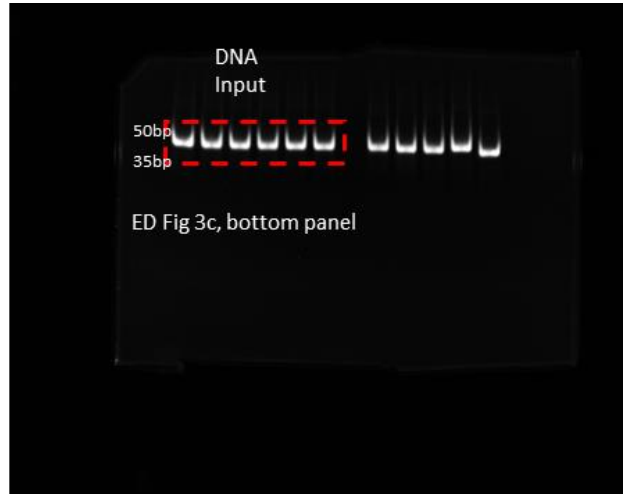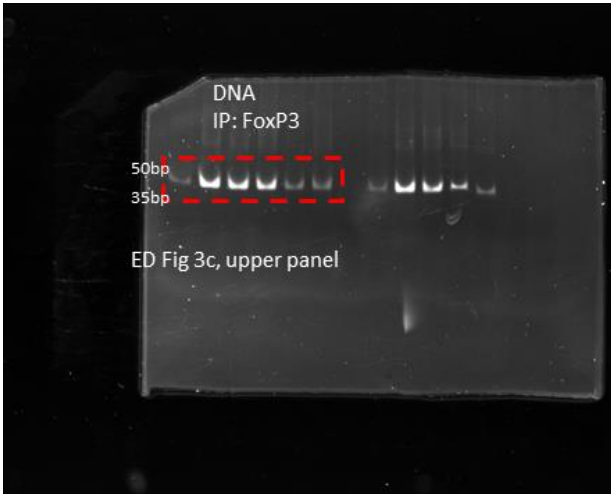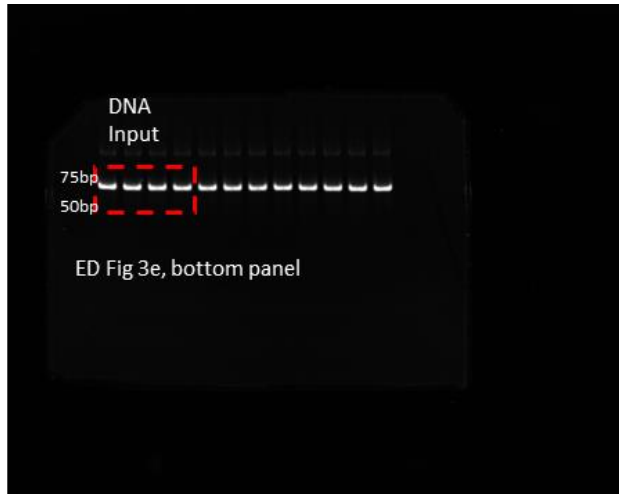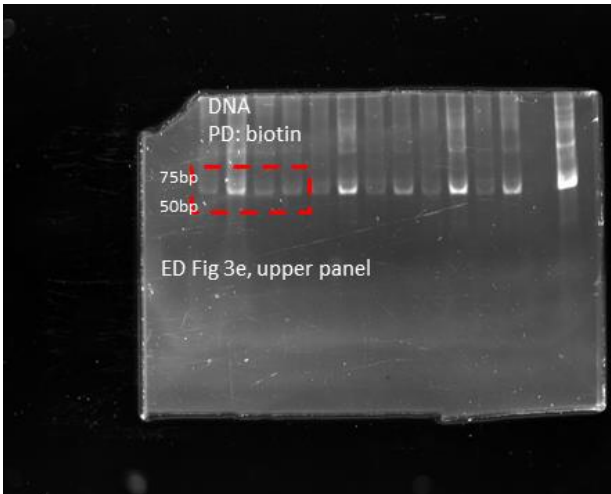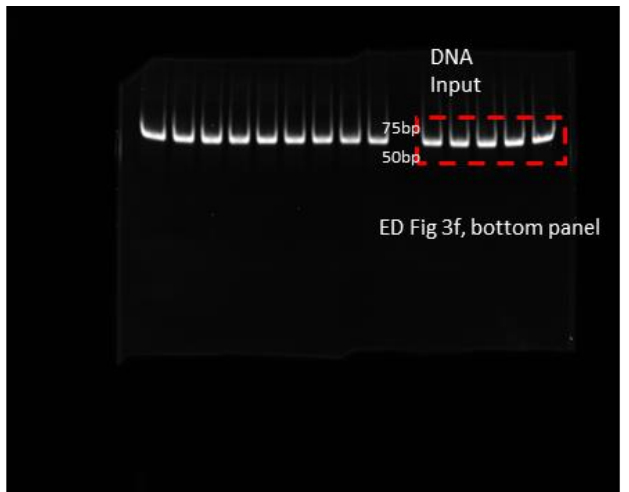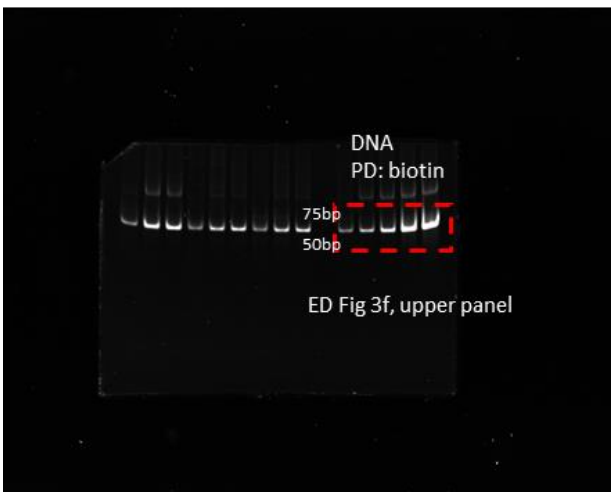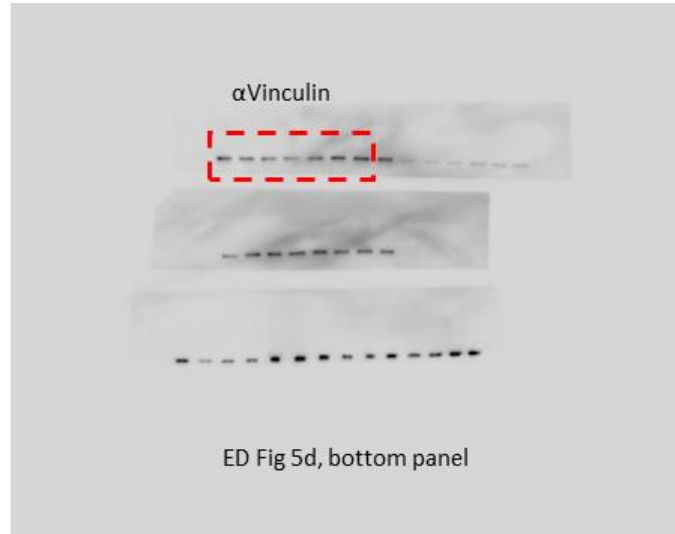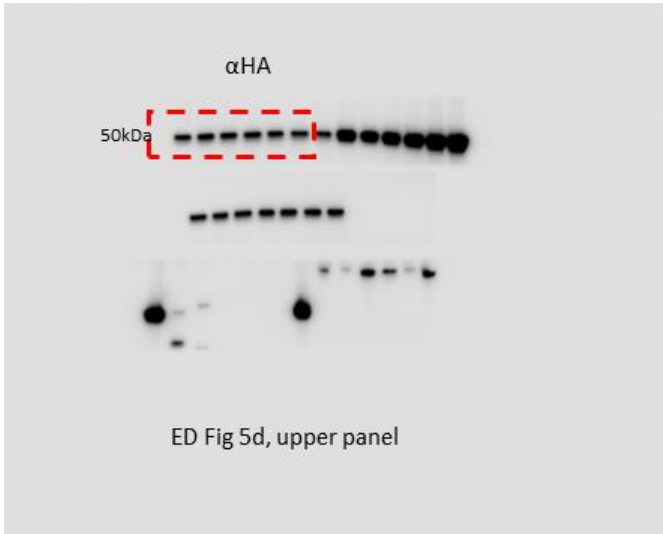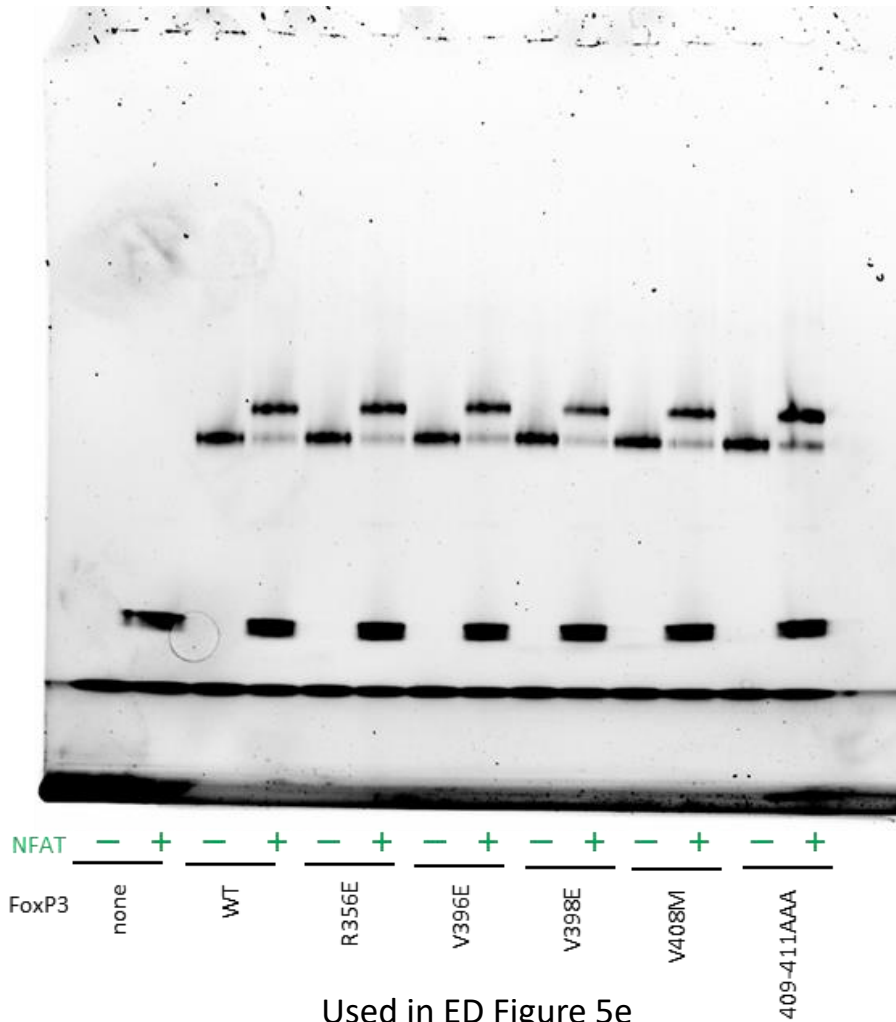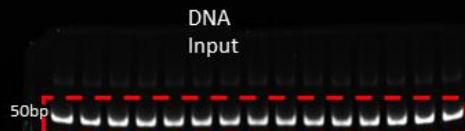

Used in ED Figure 6a

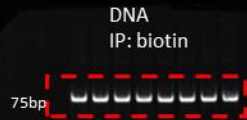Used in ED Figure 6b

Used in ED Figure 6c

For ED Figure 6

DNA
IP: HA

50bp
35bp

ED Fig 6d, upper panel

DNA
Input

50bp
35bp

ED Fig 6d, middle panel

αHA
Input

ED Fig 6d, bottom panel

Used in ED Figure 6d

DNA
IP: biotin

75bp
50bp

ED Fig 6e, upper panel

DNA
Input

75bp
50bp

ED Fig 6e, middle panel

αHA
Input

50kDa

ED Fig 6e, bottom panel

Used in ED Figure 6e

DNA
IP: HA

50bp
35bp

ED Fig 6g, upper panel

DNA
Input

50bp
35bp

ED Fig 6g, middle panel

αHA
Input

ED Fig 6g, bottom panel

Used in ED Figure 6g

Supplementary Tables

Supplementary Table 1. Summary of FoxP3 binding motifs. 1a, FoxP3 binding motif *in vitro*. 1b, FoxP3 binding motifs *in vivo*. 1c, other FKH TFs' binding motifs.
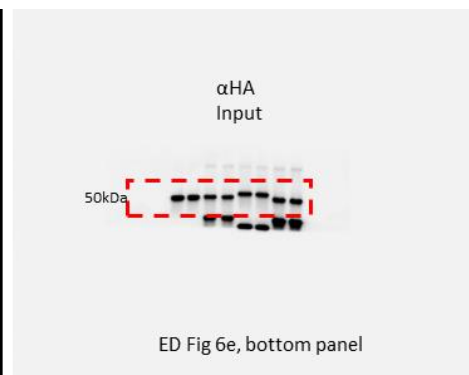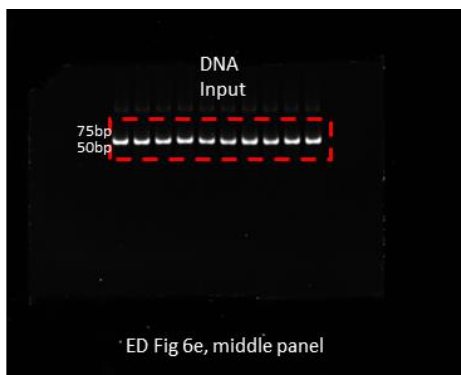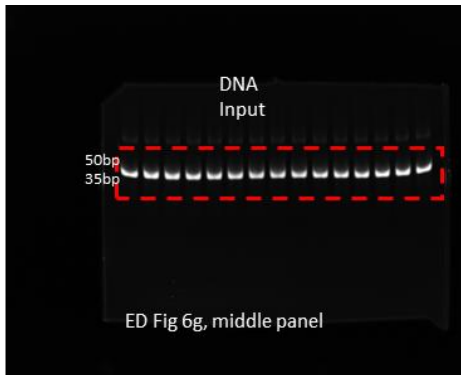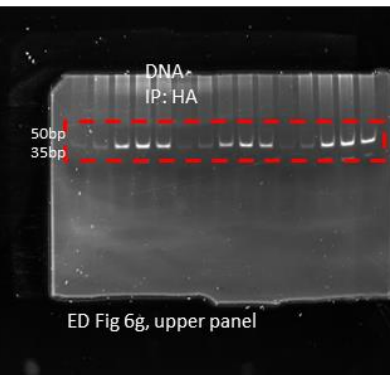
Supplementary Table 2. List of DNA oligos used in this study. 2a, allelic bias sites information. 2b, DNA oligo sequences.

Supplementary Table 3. Chromatin contacts at FoxP3-bound anchors. 3a, summary of the contacts with frequency>5 in WT Treg HiC and connected by two TnG anchors. 3b-3f, with an increasing FoxP3 PLAC-seq count threshold (>5, 10, 25, 50, 75 respectively), all the anchor information is displayed. 3g, genomic annotation for the CNR peaks overlapping with PLAC-seq counts above the threshold of 75.