

Downregulation of CB 7 Promotes E H2 and FGF 3

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BACKGROUND: C... (BC), ... (FGF 3), ... (CB 7), ... (BC), ... (G E185630), ... (CB 7), ... (FGF 3), ... (CB 7).

METHODS: A-... (C I): C... CCK-8... (E H2)/CB 7/ FGF 3.

RESULTS: I... CB 7... BC... E H2... CB 7... H3K27... BC... M... CB 7... FGF 3... BC... (I3K)-(AC... AK...

CONCLUSIONS: ... CB 7... BC.

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BACKGROUND

B... (BC)

17,000... 2... BC

(MIBC),

1... BC 3... F... BC

3... C... (II) D A

4... 5...

BC D... BC

BC,

6...

9.72 ()-317.7999878()-317.7000122()-321.7000122()-320.7000122()-322.7999878()-316.5

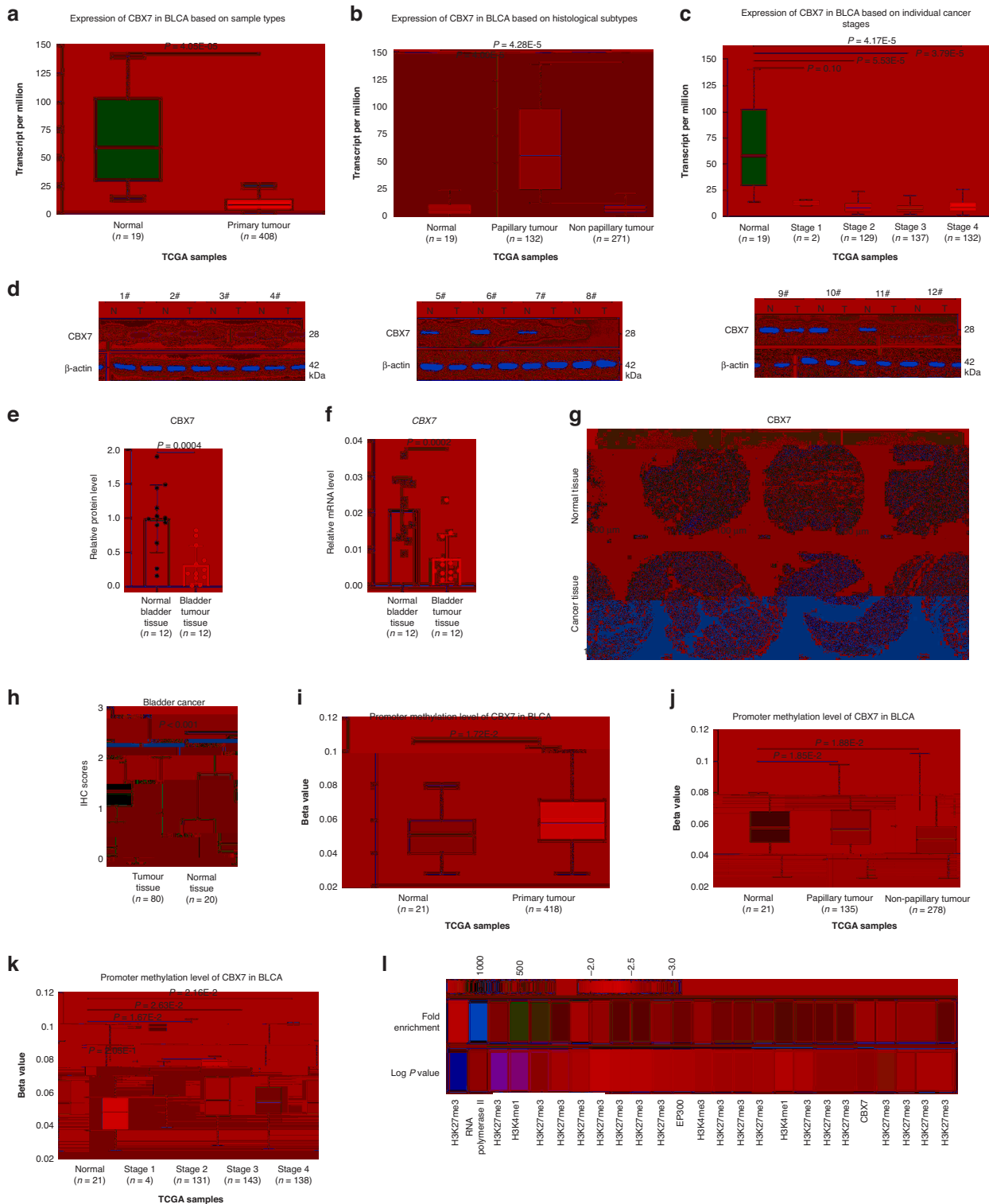
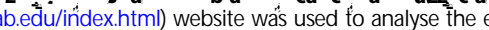
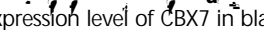
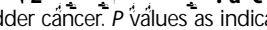
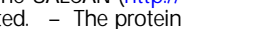


Fig. 1 CBX7  **a**  **b**  **c**  **a-c** The UALCAN (<http://ualcan.path.uab.edu/index.html>) website was used to analyse the expression level of CBX7 in bladder cancer. *P* values as indicated. – The protein expression levels () and mRNA levels () of CBX7 in the adjacent nontumor bladder tissues (*n* = 12) and bladder cancer tissues (*n* = 12) were analysed by the western blot () and RT-qPCR assay (). The protein levels of CBX7 were quantified by the ImageJ software. The paired Student's test is performed in panels () and (). *P* values as indicated in () and (). IHC staining analysis of the tissue microarray of bladder cancer by using the CBX7 antibody. The typical image and expression level of CBX7 in the nontumor tissue and bladder cancer tissue were shown. *P* values as indicated. The scale bar indicated in the panel () is 100 μm. – The UALCAN (<http://ualcan.path.uab.edu/index.html>) website was used to analyse the correlation between promoter methylation and expression of CBX7 in BLCA. *P* values as indicated. The Enrichment analysis of the ChIP-Atlas (<http://chip-atlas.org/>) was used to predict the potential transcriptional factors or histone modification bound to the CBX7 gene. We listed a number of histone methylation marks and transcription factors, and each one represented the enrichment of one of the methylation marks or transcription factors on the promoter region of CBX7. The *P* values of fold enrichment and Log(*P*) values as indicated.

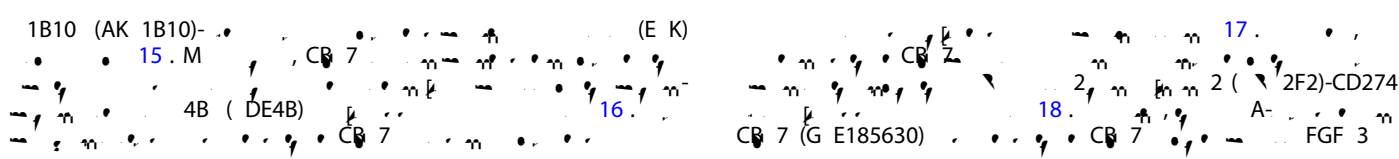
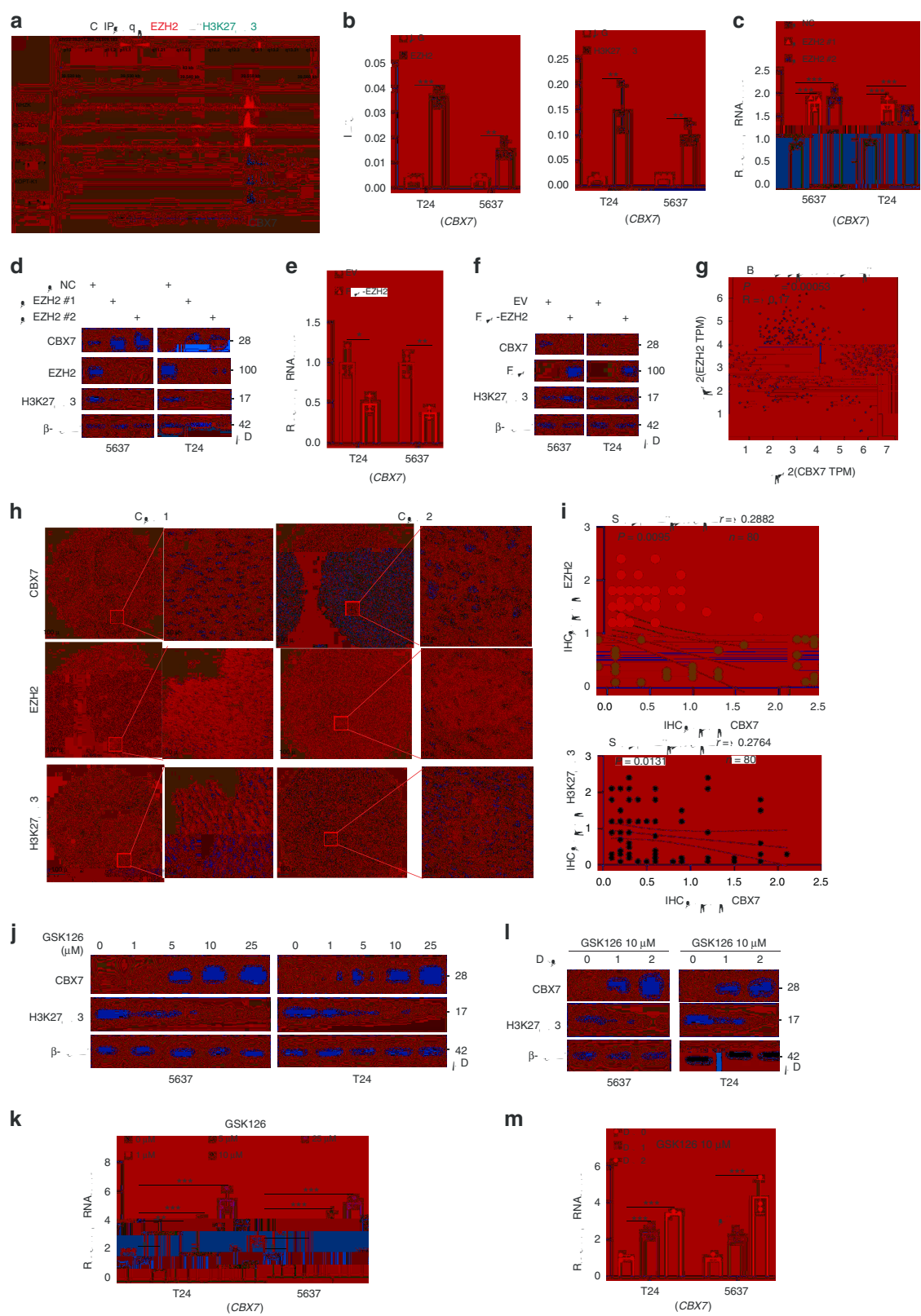
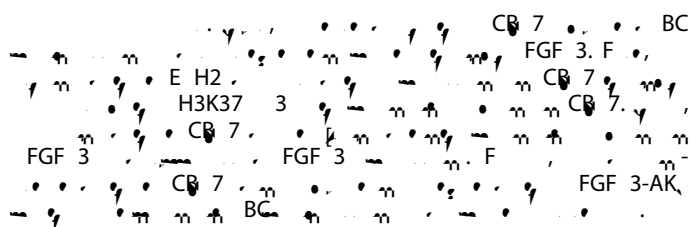
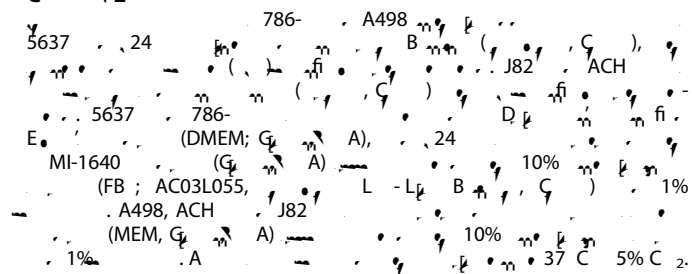


Fig. 2 EZH2 and H3K27me3 on the promoter region of CBX7. The ChIP-seq numbers and corresponding used cell lines were indicated. The ChIP-seq data were obtained from the ChIP-atlas (<http://chip-atlas.org/>). b T24 and 5637 cells were collected and ChIP-qPCR was performed. the ChIP-qPCR analysis by using the IgG or EZH2, H3K27me3 antibodies in T24 and 5637 cells. Data presented as mean \pm SD with three replicates. ** $P < 0.01$; * $P < 0.001$. c, 5637 and T24 cells were transfected with indicated siNC, siEZH2 #1, or siEZH2 #2 for 48 h. Then, cells were collected for 99939(pro3.899resor)-25ig.**

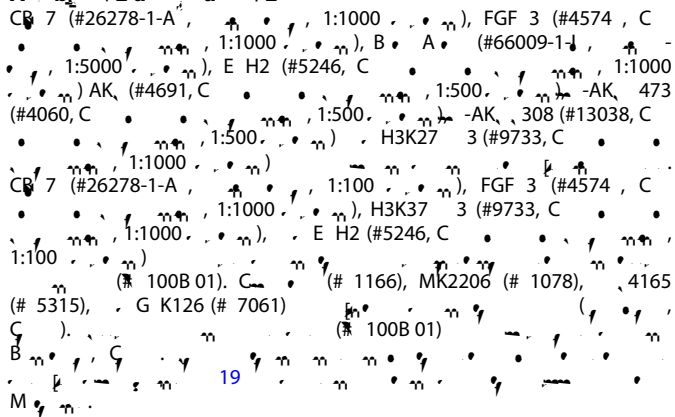


METHODS

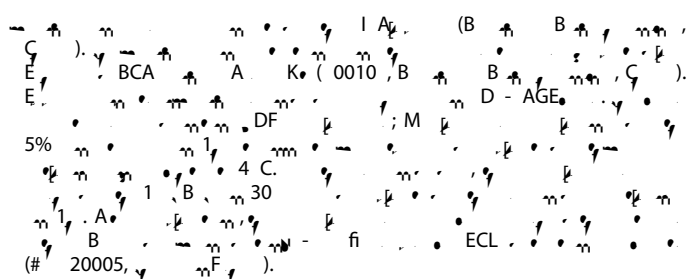
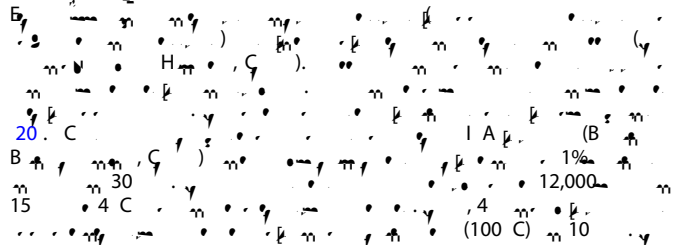
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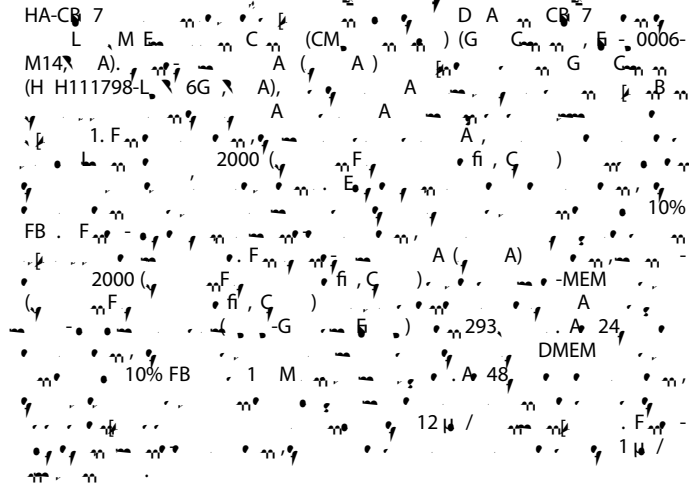
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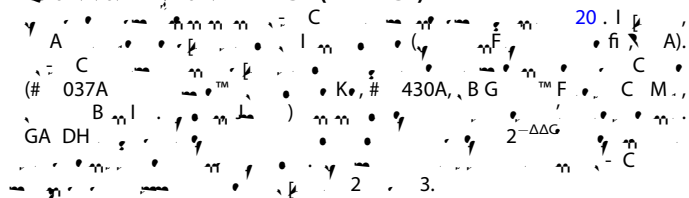
Western Blot



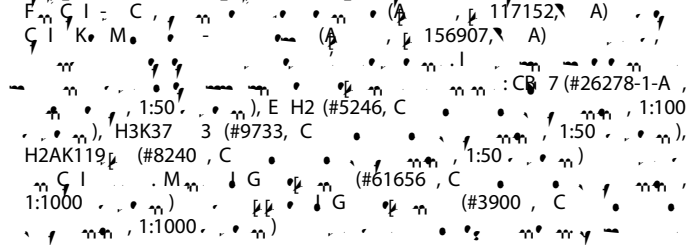
ChIP-qPCR

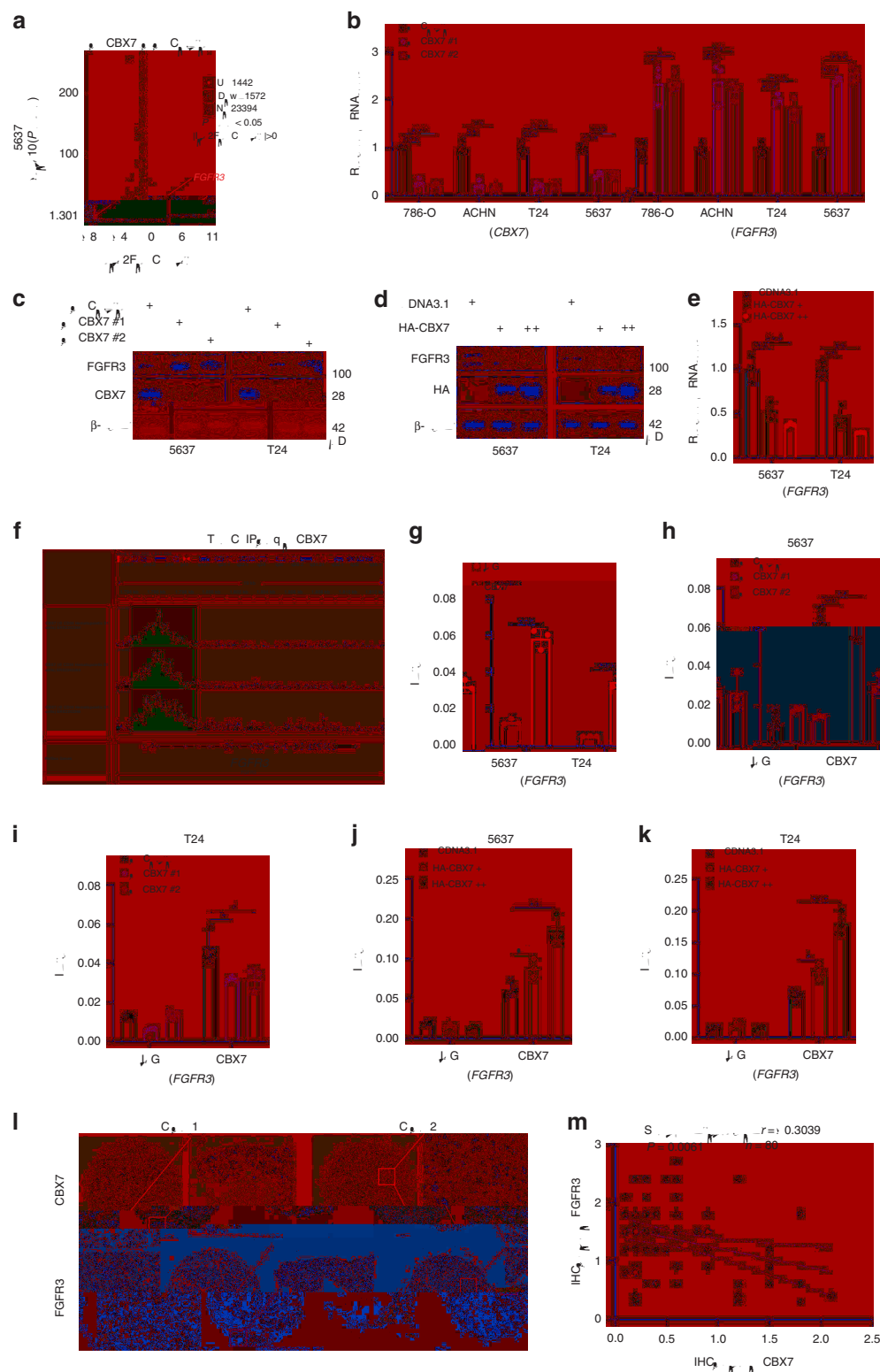


Quantitative Real-time PCR (RT-PCR)

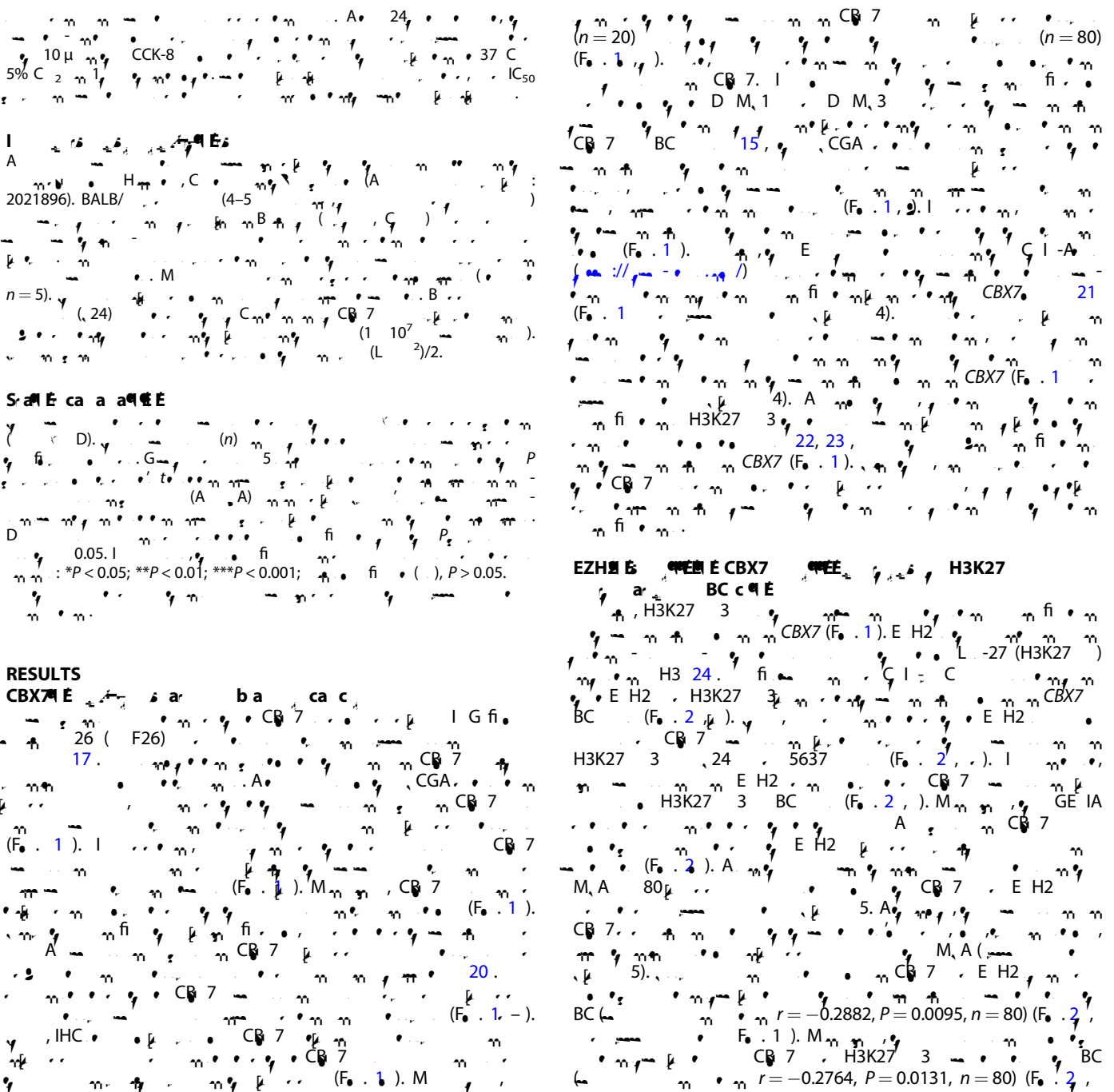


ChIP-qPCR





FB . 10 μ CCK-8 (#C0037, B) 450
CCK-8 (IC50) 24 5637 24 1000 96-
100 μ DMEM 10% FB



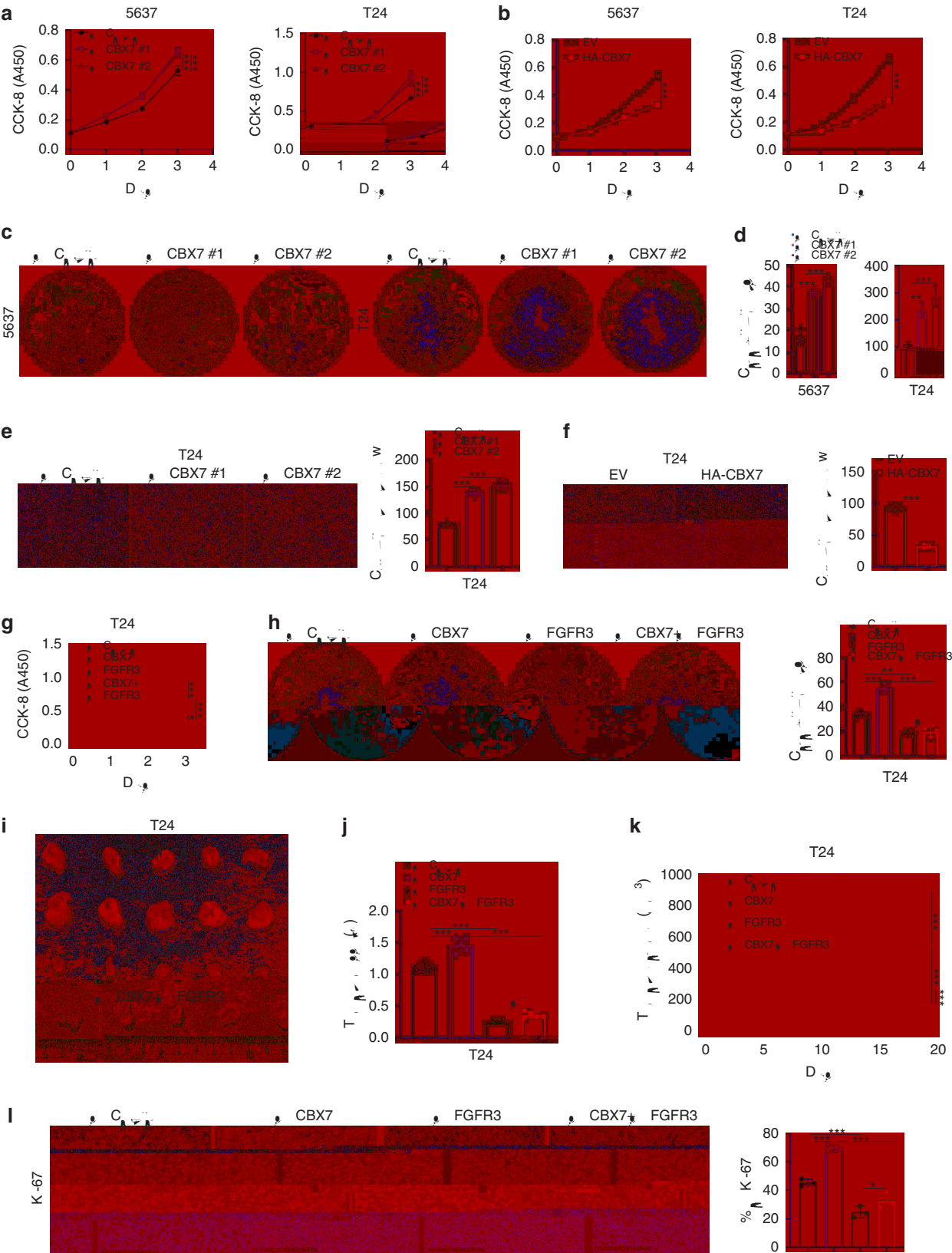
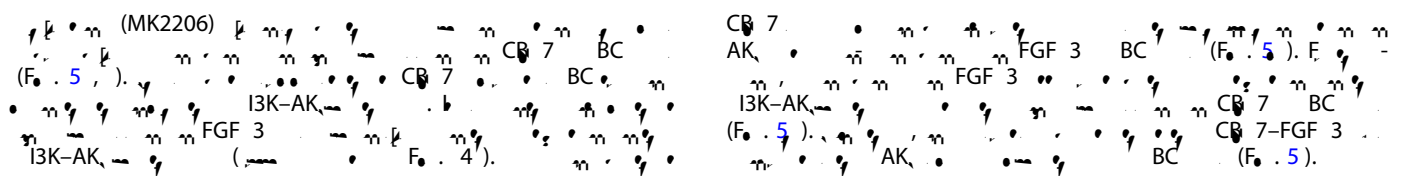
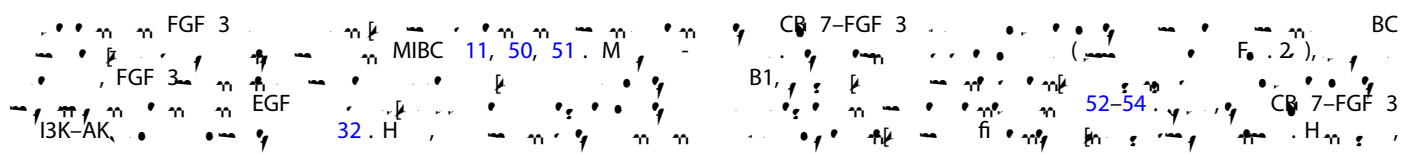
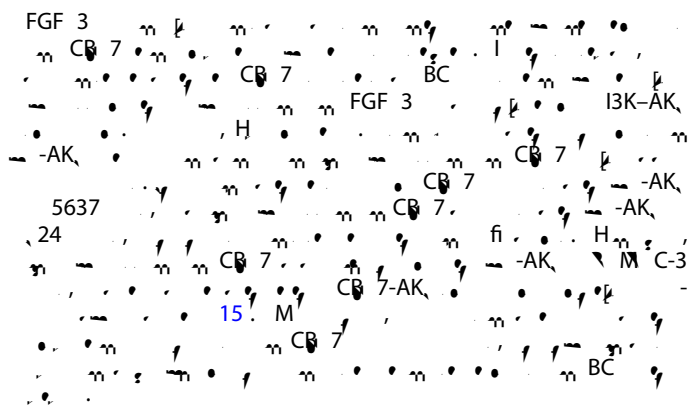


FIG. 1. CBX7 promotes cell proliferation and tumorigenesis in breast cancer cells. (a) Cell growth curves of 5637 and T24 cells transfected with CBX7 #1 or CBX7 #2. (b) Cell growth curves of 5637 and T24 cells transfected with EV or HA-CBX7. (c) Representative images of 5637 cell colonies transfected with CBX7 #1 or CBX7 #2. (d) Quantification of colony formation in 5637 and T24 cells. (e) Representative images of T24 cell colonies transfected with CBX7 #1 or CBX7 #2. (f) Quantification of colony formation in T24 cells transfected with EV or HA-CBX7. (g) Cell growth curves of T24 cells transfected with CBX7 or FGFR3. (h) Representative images of T24 cell colonies transfected with CBX7 or FGFR3. (i) Representative images of T24 cell colonies transfected with CBX7 or FGFR3. (j) Quantification of colony formation in T24 cells transfected with CBX7 or FGFR3. (k) Tumor growth curves of T24 cells transfected with CBX7 or FGFR3. (l) Representative images of K-67 staining in T24 cell colonies transfected with CBX7 or FGFR3. (m) Quantification of K-67 staining in T24 cell colonies transfected with CBX7 or FGFR3.









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CONCLUSIONS

CB7 BC E H2 CB7 H3K27 3 BC FGF3 BC B CB7 fi CB7 BC

DATA AVAILABILITY

The data generated for this study are available in the public domain.

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- ## AUTHOR CONTRIBUTIONS

FUNDING

COMPETING INTERESTS

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

CONSENT TO PUBLISH

ADDITIONAL INFORMATION

[illegible]