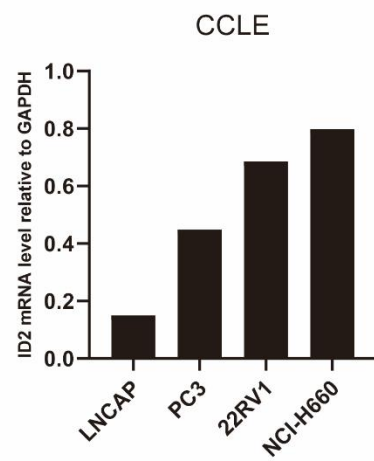
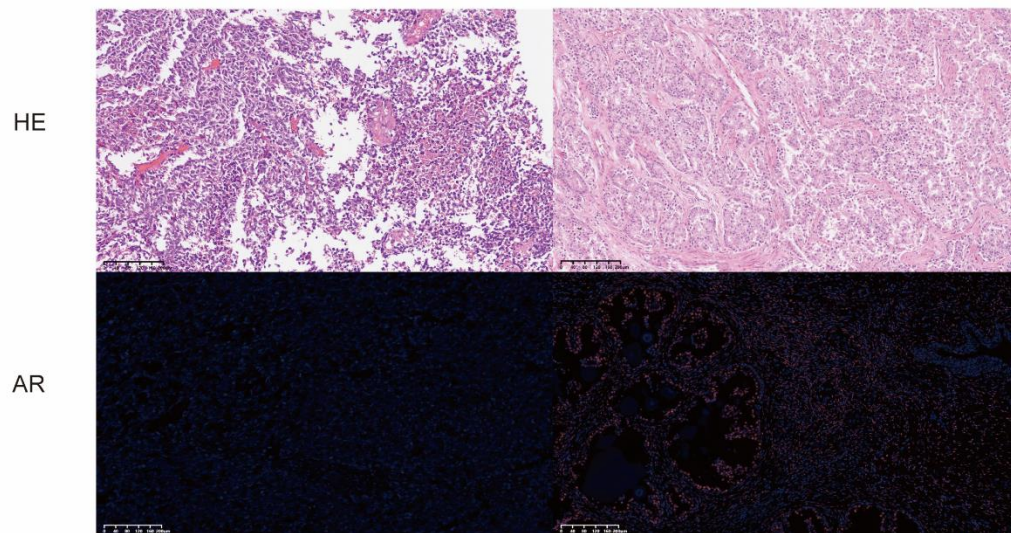


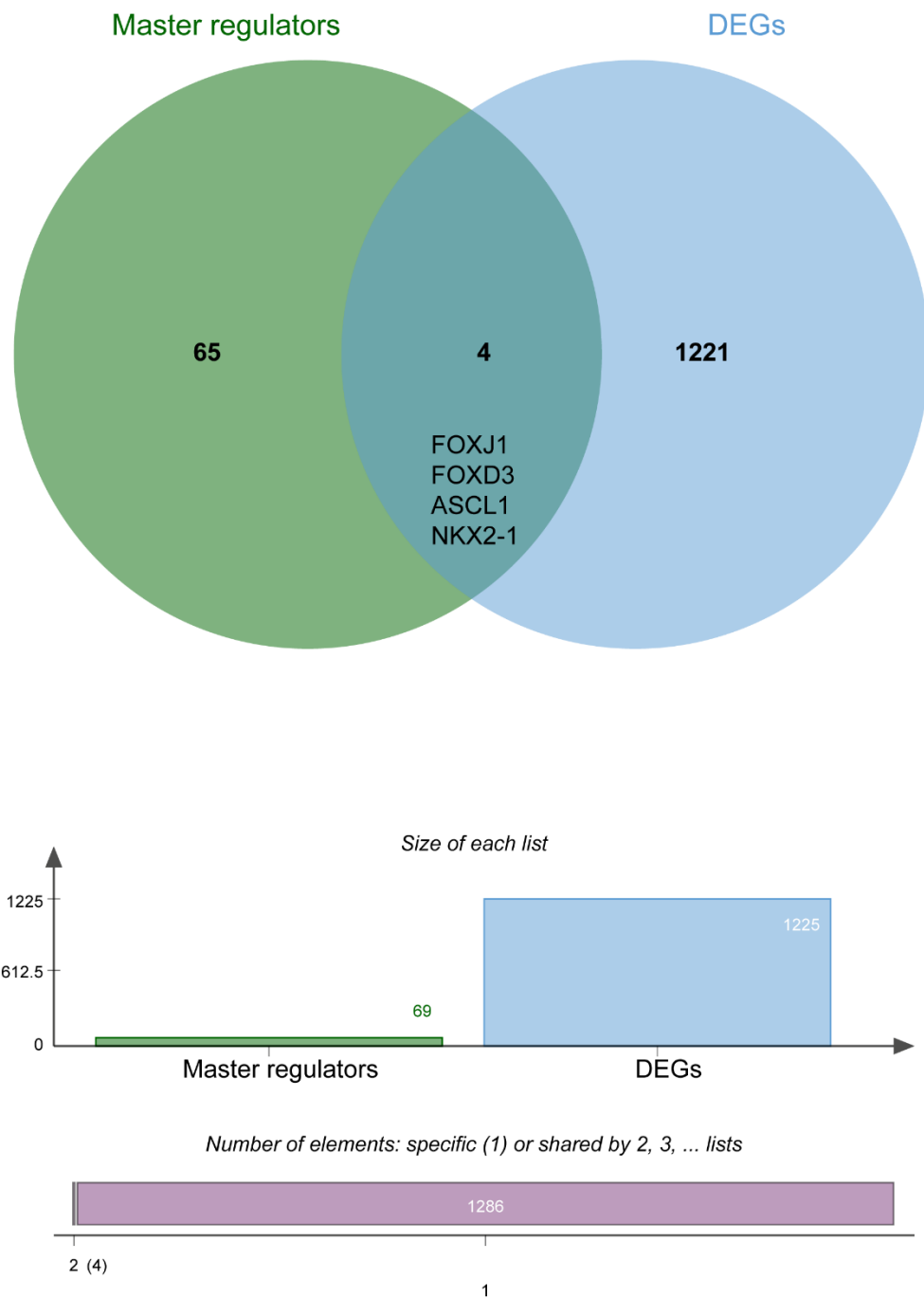
(A)



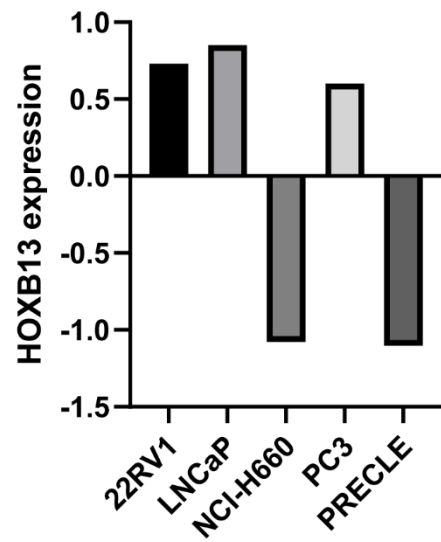
(B)



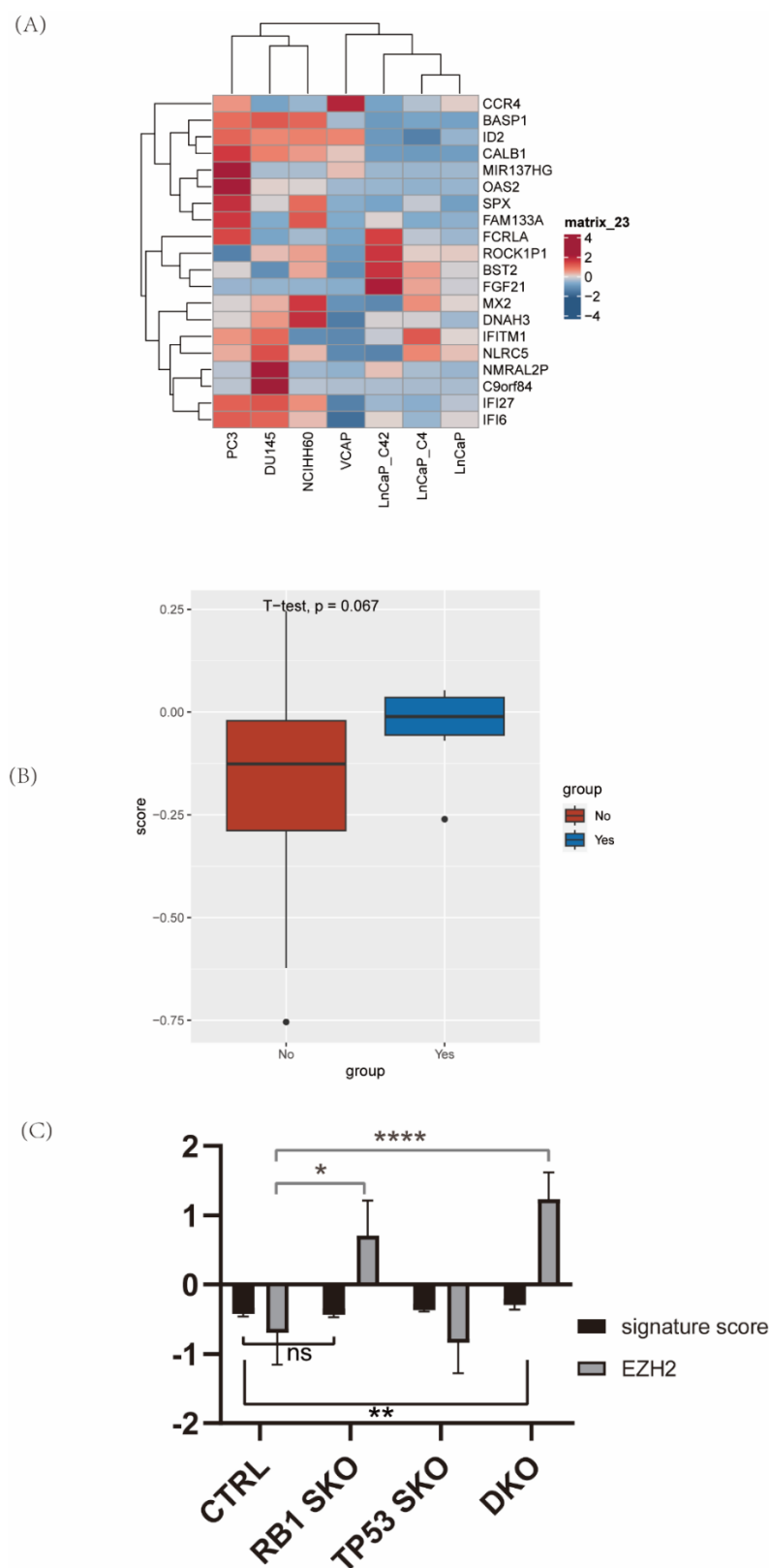
**Figure S1.** ID2 Expression Is Upregulated in NEPC and DNPC. (A) Relative ID2 expression level in PCa cell lines from CCLE. (B) HE staining and immunofluorescent of clinical PCa patients.



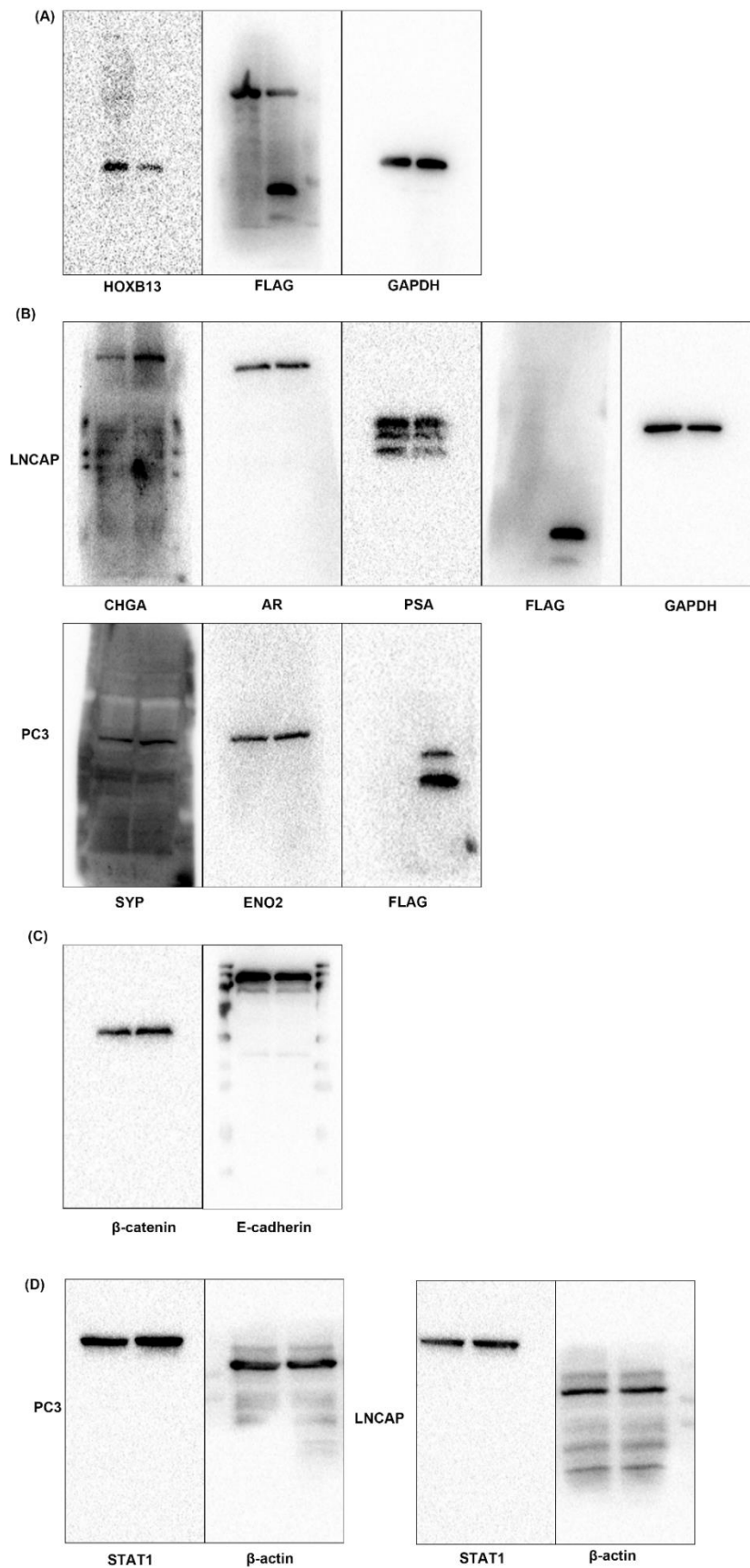
**Figure S2.** Transcriptomic Reprogramming and Pathway Analysis upon ID2 Overexpression. Intersection of Master regulators and DEGs. Master regulators was identified by viper R packages to infer effects of ID2 on protein activity changes. DEGs was identified using RNA-seq data of clinical NEPC and ADPC samples from SU2C 2019.



**Figure S3.** ID2 Attenuates AR Signaling and Promotes NETD. Z-score normalized HOXB13 mRNA expression in PCa cell lines from CCLE.



**Figure S4.** ID2 UP50 Signature Generation and Validation of Its Effectiveness. (A) Expression of top 20 DEGs in PCa cell lines. (B) ID2 UP50 signature score in clinical sample with NE features or not. (C) ID2 UP50 signature analysis and EZH2 expression analysis after RB1 or TP53 gene knock out in LNCaP cell. SKO: single knock out. DKO: double knock out.



**Figure S5.** Original blot of this study. (A) Original blot of Figure 2E. (B) Original blot of Figure 3A. (C) Original blot of Figure 4G. (D) Original blot of Figure 6E.