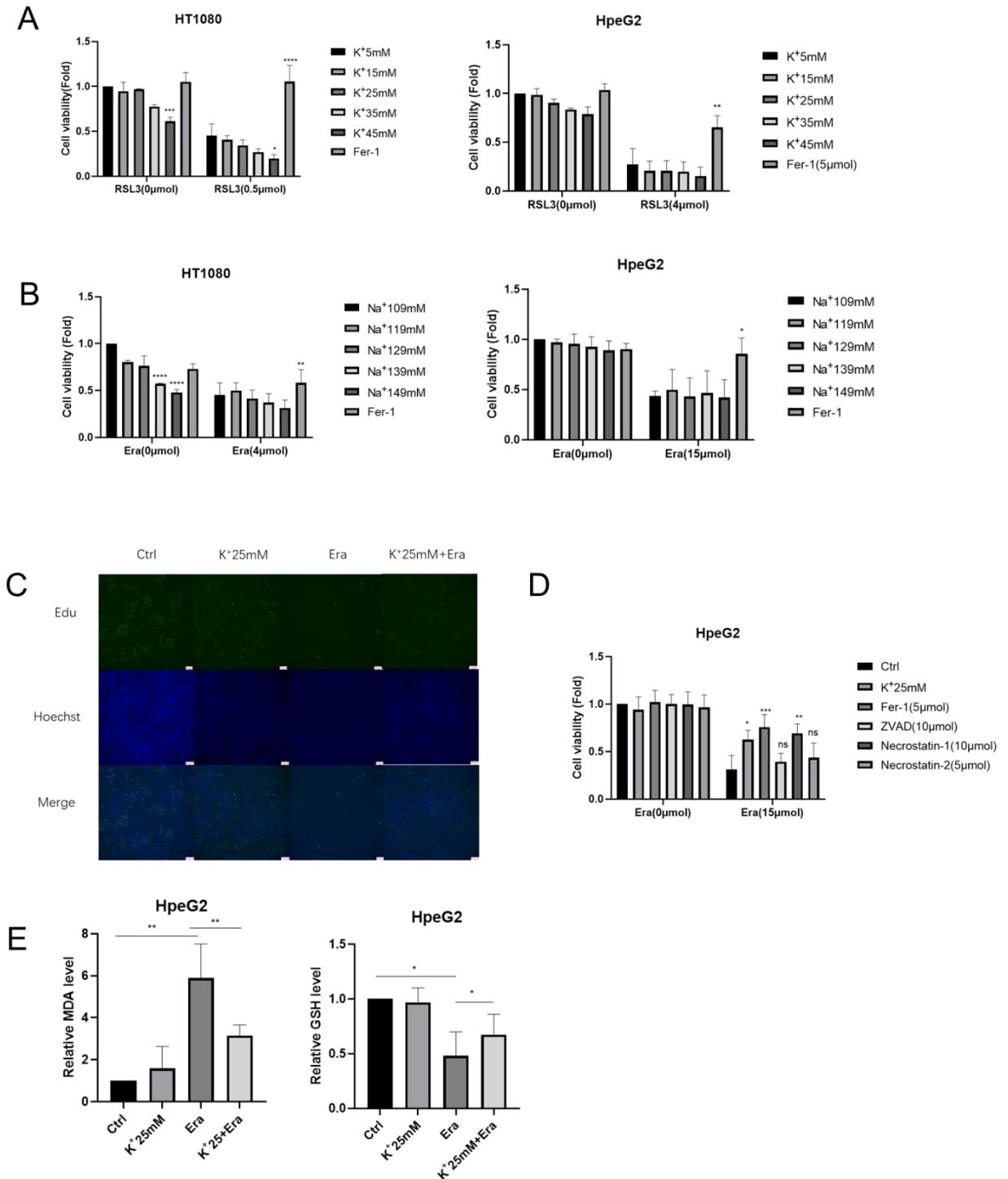


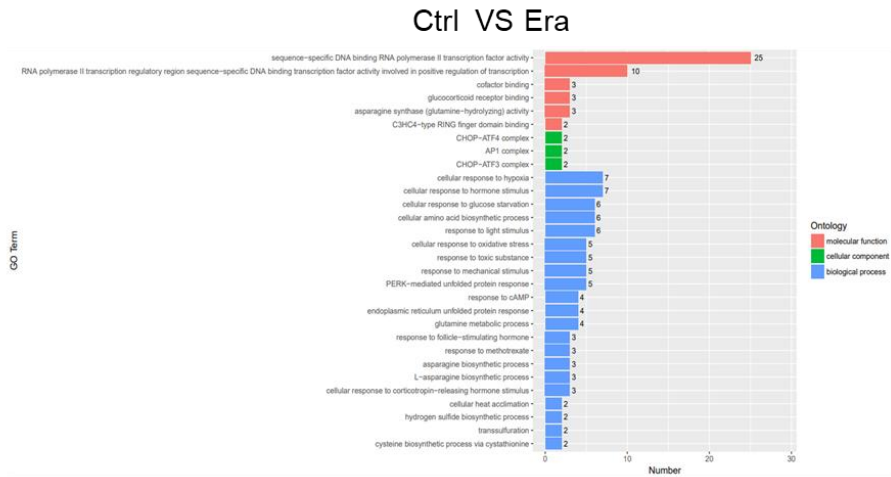
Table S1 Primers for knockdown plasmids

Gene	Sequence
sgATF3#1	5'-CACCGGGTGTCCATCACAAAAGCCG-3' 3'-AAACCGGCTTTTGTGATGGACACCC-5'
sgATF3#2	5'-CACCGCTGAGCCCGGACAATACACG-3' 3'-AAACCGTGTATTGTCCGGGCTCAGC-5'
sgATF3#3	5'-CACCGCTGAGCCCGGACAATACACG-3' 3'-AAACCGTGTATTGTCCGGGCTCAGC-5'
sgATF3#4	5'-CACCGCCACCGGATGCCTCTGCGC-3' 3'-AAACGCGCAGAGGCATCCGGTGGC-5'

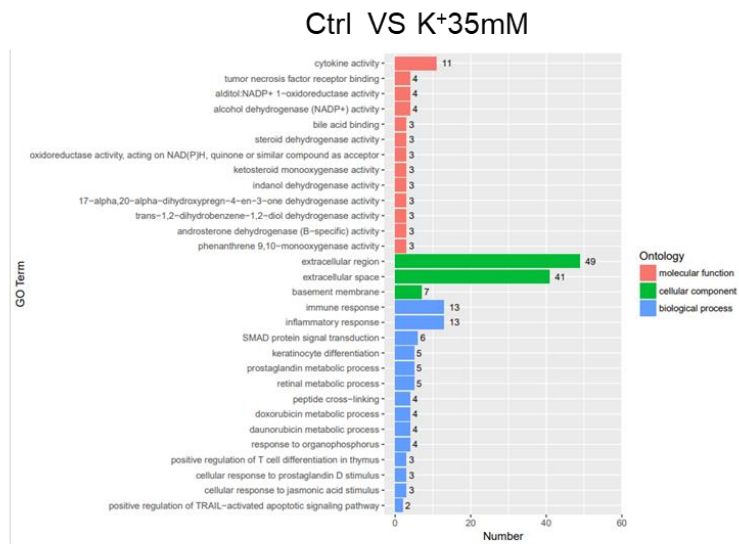


FigureS1 High potassium environment attenuate sensitivity to ferroptosis (A) CCK-8 assay assessed cell viability of HT1080 and HepG2 cells treated with RSL3 (0.5µM, 4µM) in high potassium environment for 48 h respectively. The relative viability was normalized to K⁺5mM group (B) The viability of cells treated with Erastin in the condition of additional NaCl. (C) HepG2 cells cultured with K⁺25mM medium and Erastin (15µM) in 96 wells-plate for 48 h then incubated with 10µM Edu. (D) The cell viability of HT1080 with the treatments DMSO, Erastin (15µM) for 48 h combined with Ferrostatin-1 (5µM), Z-VAD-FMK (10µM), Necrostatin-1(10µM) and Necrostatin-2 (5µM) were monitored using a CCK-8 assay. (E) MDA and GSH level in HT1080 cells treated with Erastin (10µM) in high potassium environment for 48 h. *P < 0.05. **P < 0.01. ***P < 0.001. ****P < 0.0001.

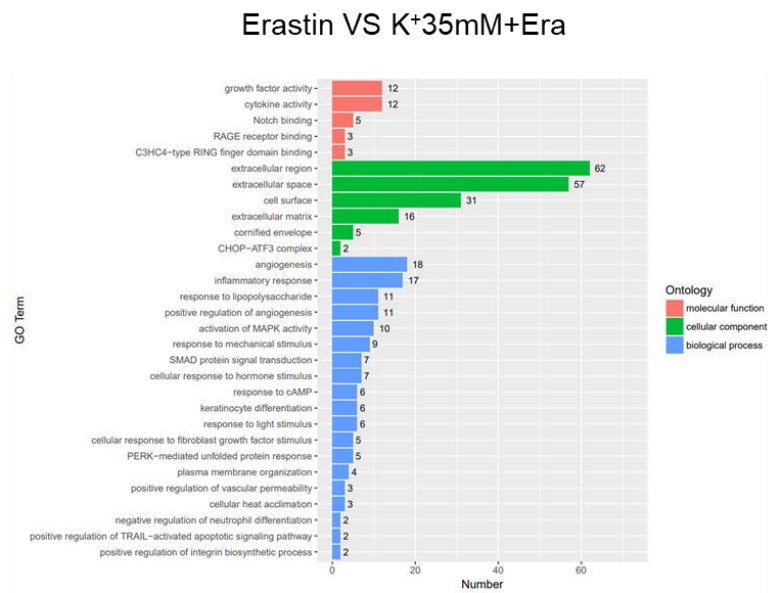
A



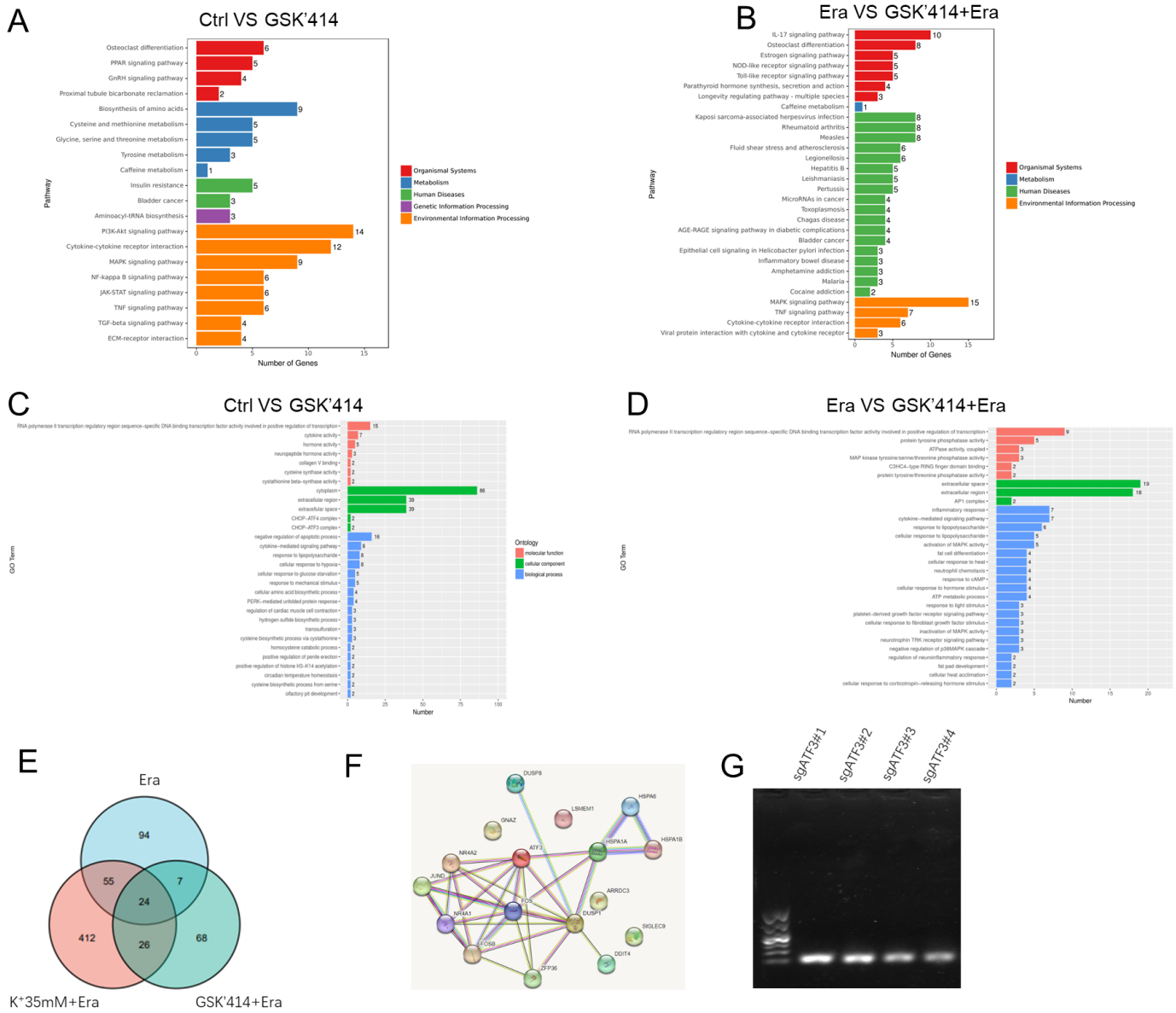
B



C



FigureS2 GO analysis indicated high potassium environment may regulate PERK pathway (A-C) The analysis of GO which cells treated with Erastin, K⁺35mM and combination of K⁺35mM and Erastin.



FigureS3 The RNA sequence analysis of cells treated with GSK'414 (A-D) The KEGG and GO analysis of cells treated with GSK'414 and combination of GSK'414 and Erastin. (E-F) Venn and PPI analysis of Era group, K⁺35mM+Era group and GSK'414+Era group. (G) The verification of knockout plasmids of ATF3

Both uncropped exposure and white pictures were offered as follow:

Figure 3B

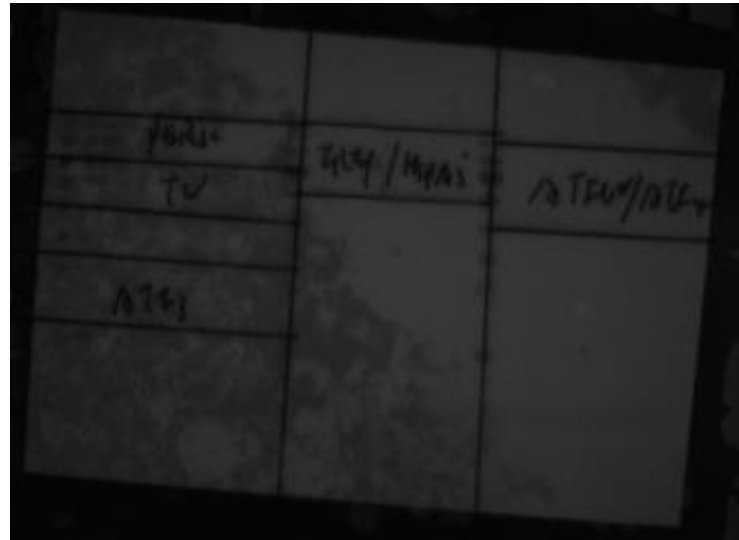
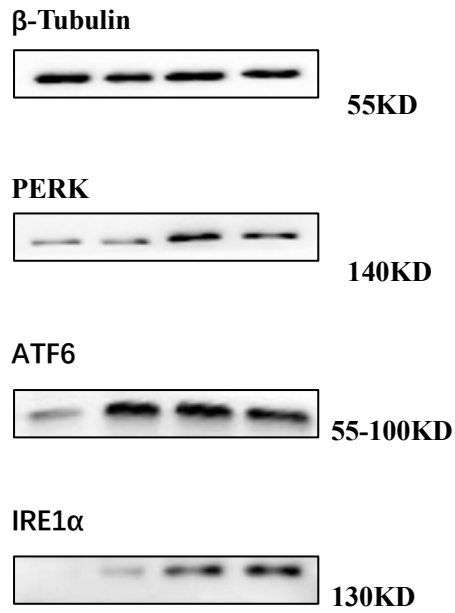


Figure 4D and 4E

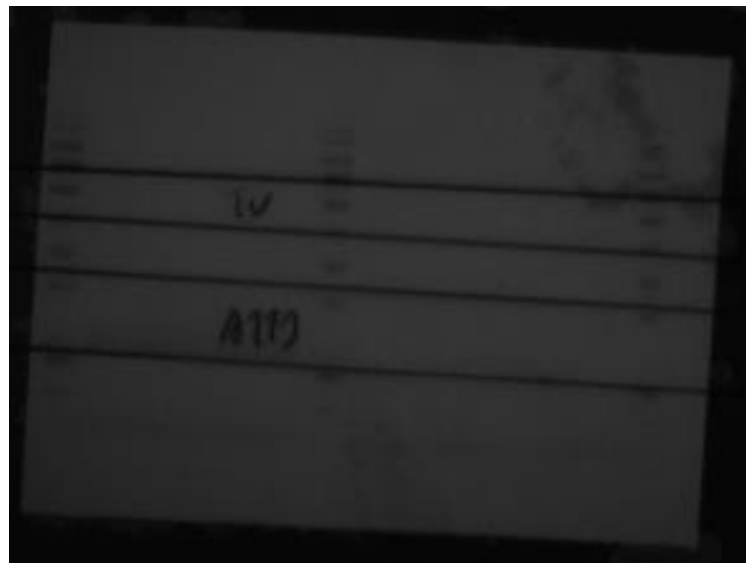
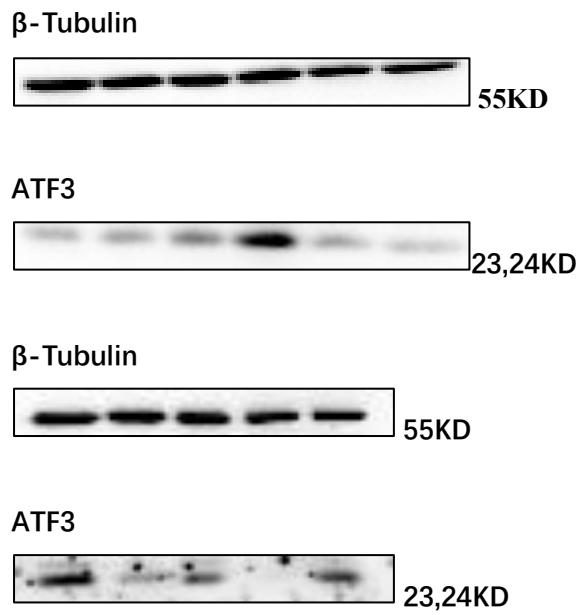


Figure 4H

β -Tubulin



Flag

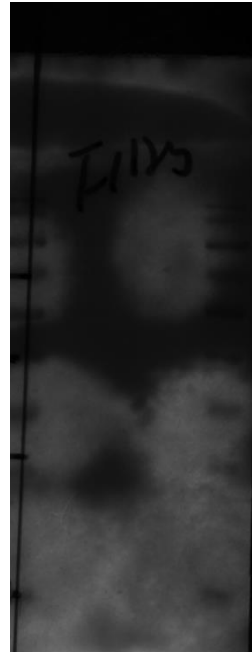
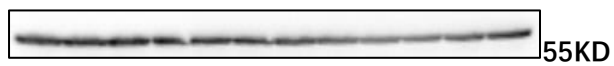


Figure 5E

β -Tubulin



ATF3

