

ORIGINAL RESEARCH ARTICLE

Investigating the role of *TIMM8B* in lung adenocarcinoma: Expression patterns, prognostic value, and therapeutic implications

Supplementary File

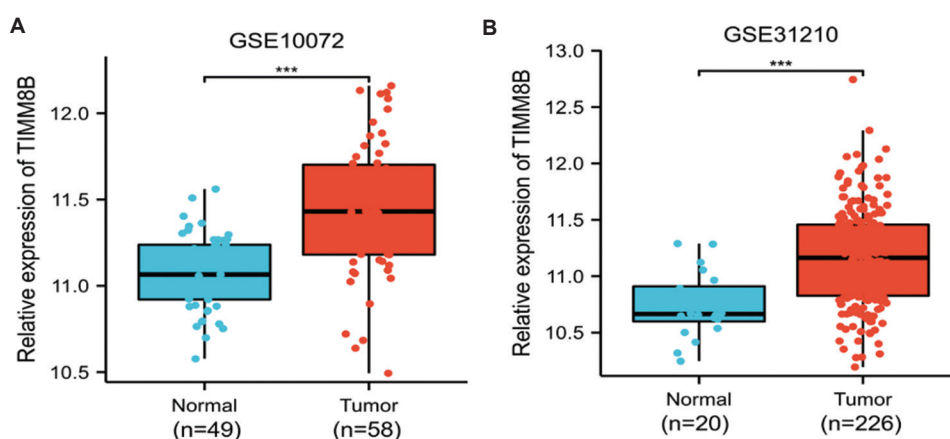


Figure S1. Differential expression analysis of translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*) in normal and tumor tissues using the Mann–Whitney U-test. (A) Visualization of *TIMM8B* expression in the GSE10072 cohort. (B) Illustration of *TIMM8B* expression in the GSE31210 cohort. Statistical significance is indicated by * for $p < 0.05$, ** for $p < 0.01$, and *** or **** for $p < 0.001$.



Figure S2. Survival analysis of Translocase of inner mitochondrial membrane 8 homolog B expression on overall survival in various cancer types. Log_{10} -transformed hazard ratios from the Cox regression model for various cancer types using the Gene Expression Profiling Interactive Analysis 2 database.

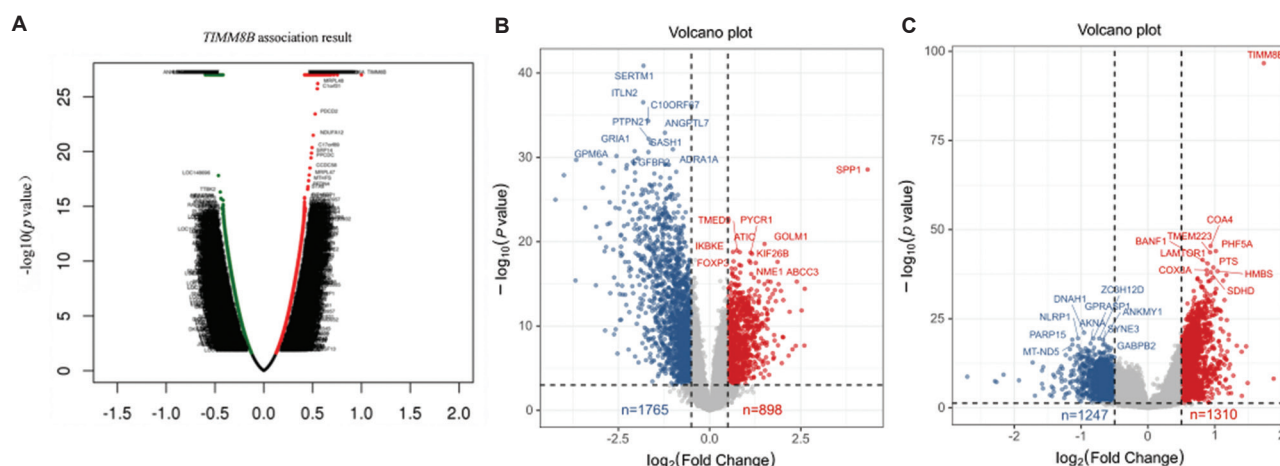


Figure S3. Analysis of translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*)-related genes in lung adenocarcinoma (LUAD). (A) Co-expression analysis of genes associated with *TIMM8B* in LUAD using LinkedOmics and visualization via a volcano plot. (B) Volcano plot comparing differentially expressed genes (DEGs) between LUAD and normal tissue in GSE43458. (C) Volcano plot comparing DEGs between *TIMM8B*^{high} and *TIMM8B*^{low} patients in LUAD.

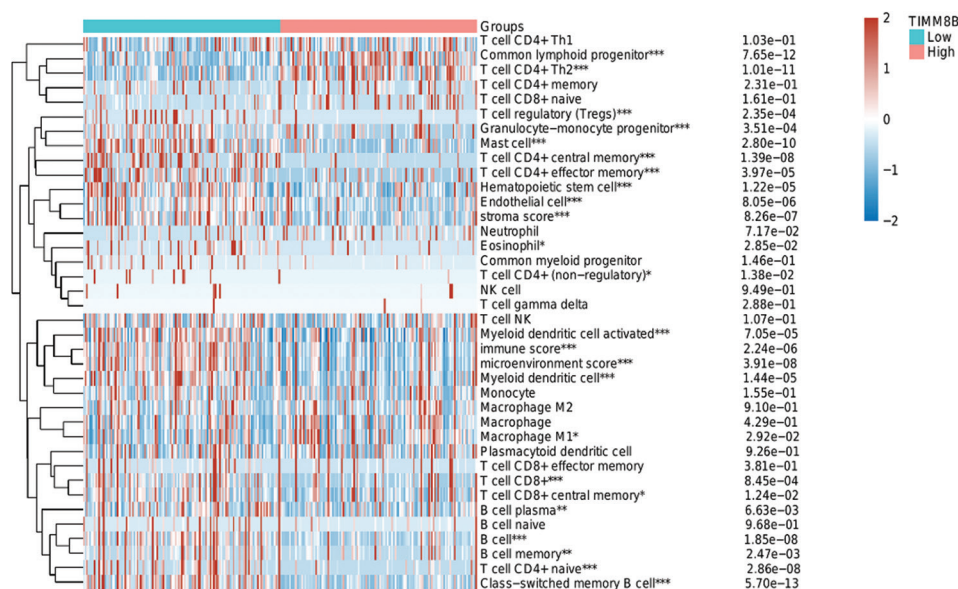


Figure S4. Correlation of translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*) with immune cell types in lung adenocarcinoma (LUAD). Heatmap showing immune cell signatures in *TIMM8B*^{low} and *TIMM8B*^{high} groups of TCGA LUAD. Statistical significance is denoted by * for $p < 0.05$, ** for $p < 0.01$, and *** for $p < 0.001$. The Wilcoxon test was used for comparisons.

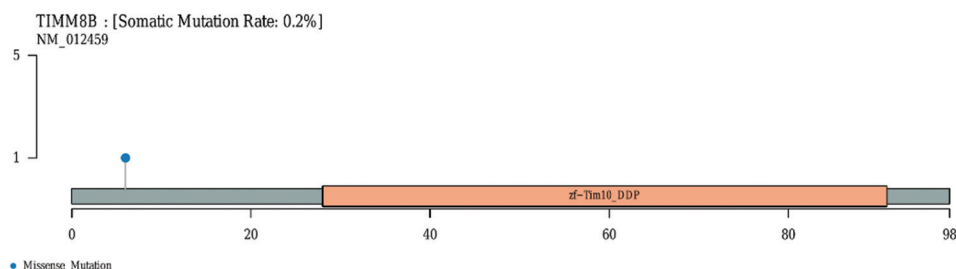


Figure S5. Translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*) mutation analysis in TCGA lung adenocarcinoma (LUAD). Lollipop charts representing mutations in the *TIMM8B* gene within the TCGA LUAD cohort ($n = 516$).

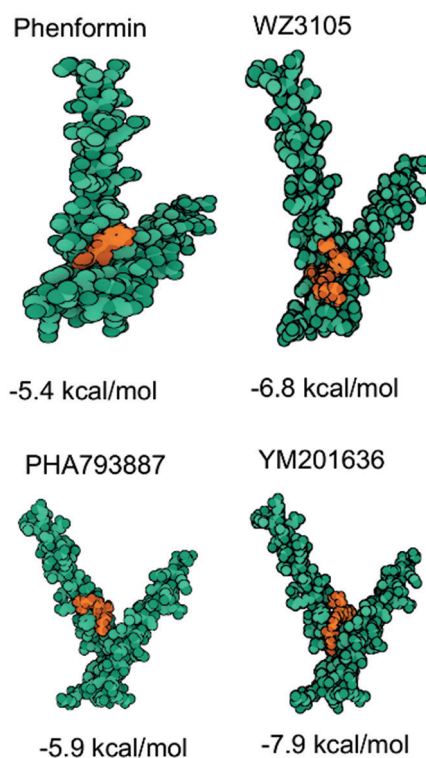


Figure S6. Stable interactions between translocase of inner mitochondrial membrane 8 homolog B, and drug molecules in lung adenocarcinoma. Binding mode of phenformin, PHA793887, WZ3105, and YM201636 to *TIMM8B*.

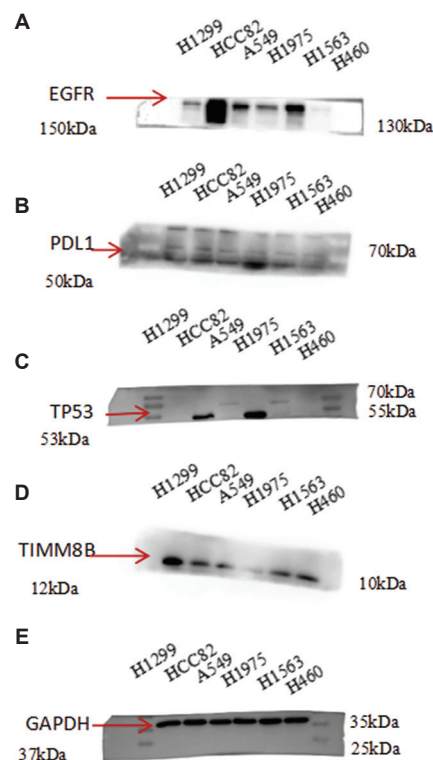


Figure S7. Original images for western blotting for EGFR, PDL1, TP53, translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*), and GAPDH in Figure 11A. (A) Western blotting for EGFR (150 kDa), (B) western blotting for PD-L1 (50 kDa), (C) western blotting for TP53 (53 kDa), (D) western blotting for *TIMM8B* (12 kDa), and (E) western blotting for GAPDH (37 kDa).

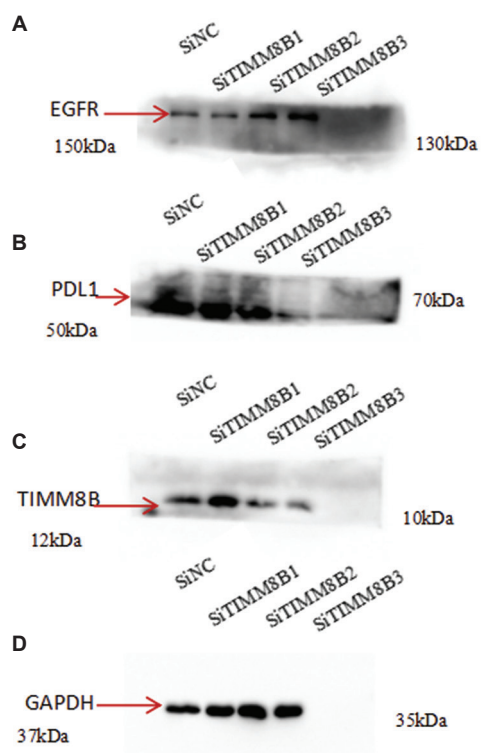


Figure S8. Original images for western blotting for EGFR, PDL1, Translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*), and GAPDH in Figure 11C. (A) Western blotting for EGFR (150 kDa), (B) western blotting for PDL1 (50 kDa), (C) western blotting for *TIMM8B* (12 kDa), and (D) western blotting for GAPDH (37 kDa).

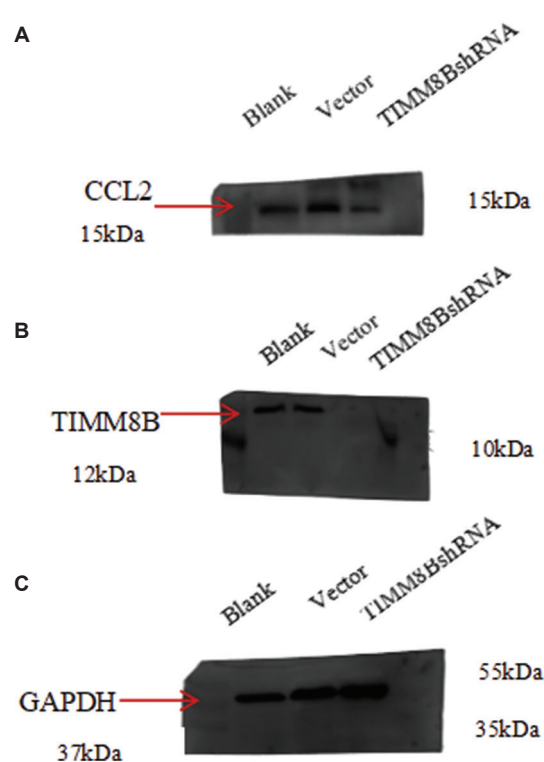


Figure S10. Original images for western blotting for CCL2, translocase of inner mitochondrial membrane 8 homolog B, and GAPDH in Figure 12H. (A) Western blotting for CCL2 (32 kDa), (B) western blotting for (12 kDa), and (C) western blotting for GAPDH (37 kDa).

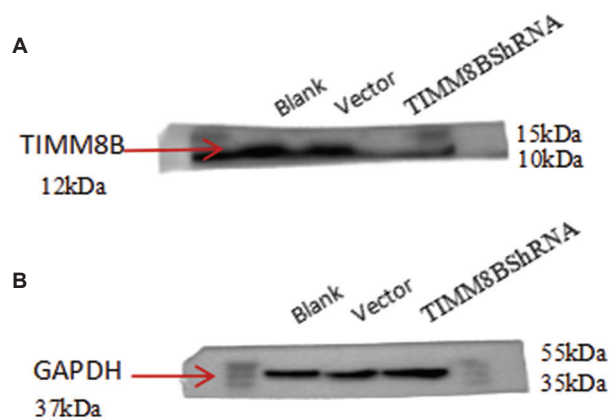


Figure S9. Original images for western blotting for translocase of inner mitochondrial membrane 8 homolog B (*TIMM8B*), and GAPDH in Figure 11E. (A) Western blotting for *TIMM8B* (12 kDa), and (B) western blotting for GAPDH (37 kDa).