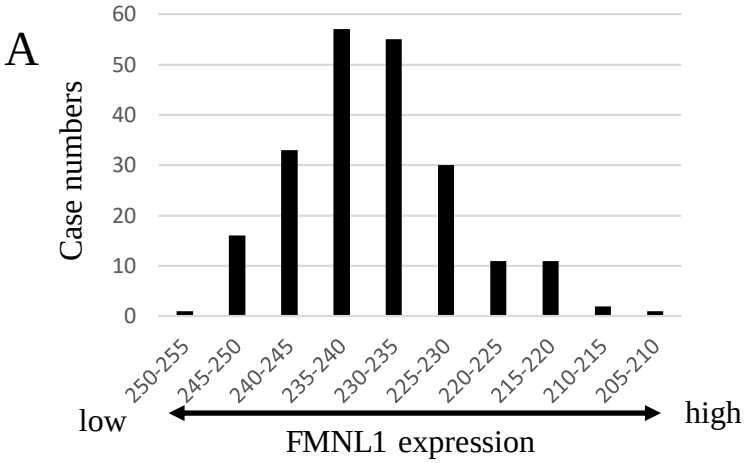

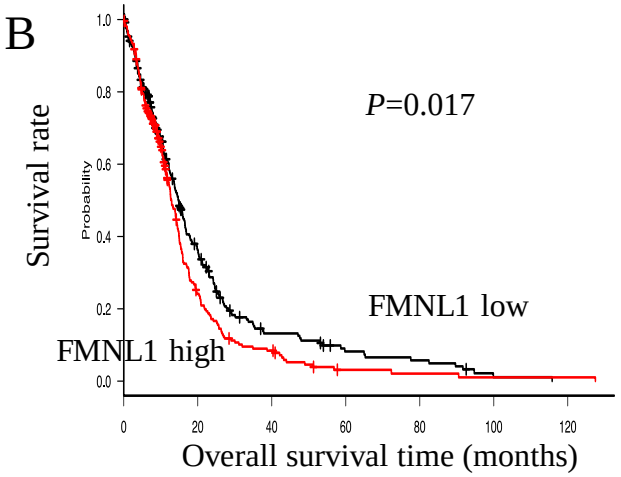

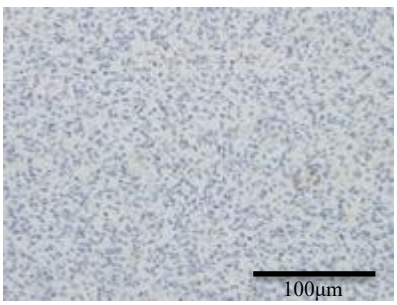

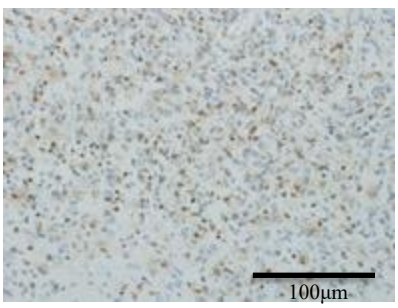

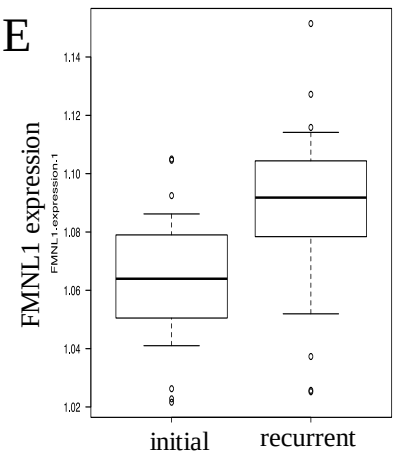

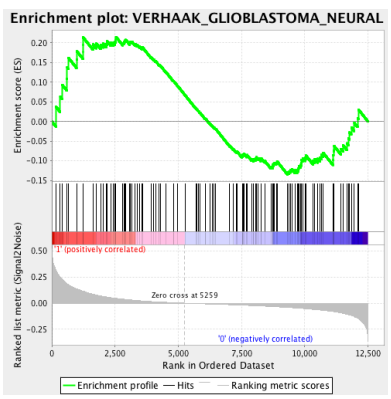

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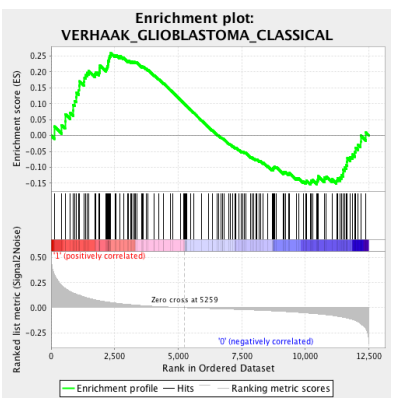
FDR:0.982



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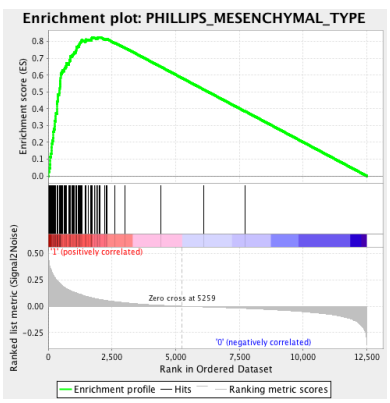
P-value:0.914
FDR:0.914



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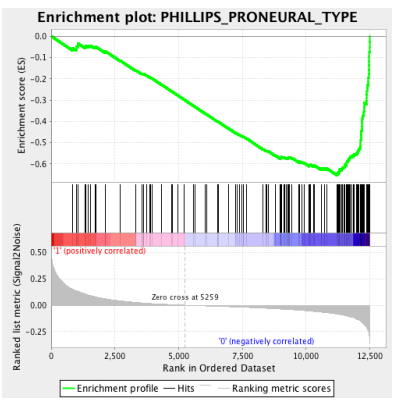
P-value:0.004
FDR:0.047

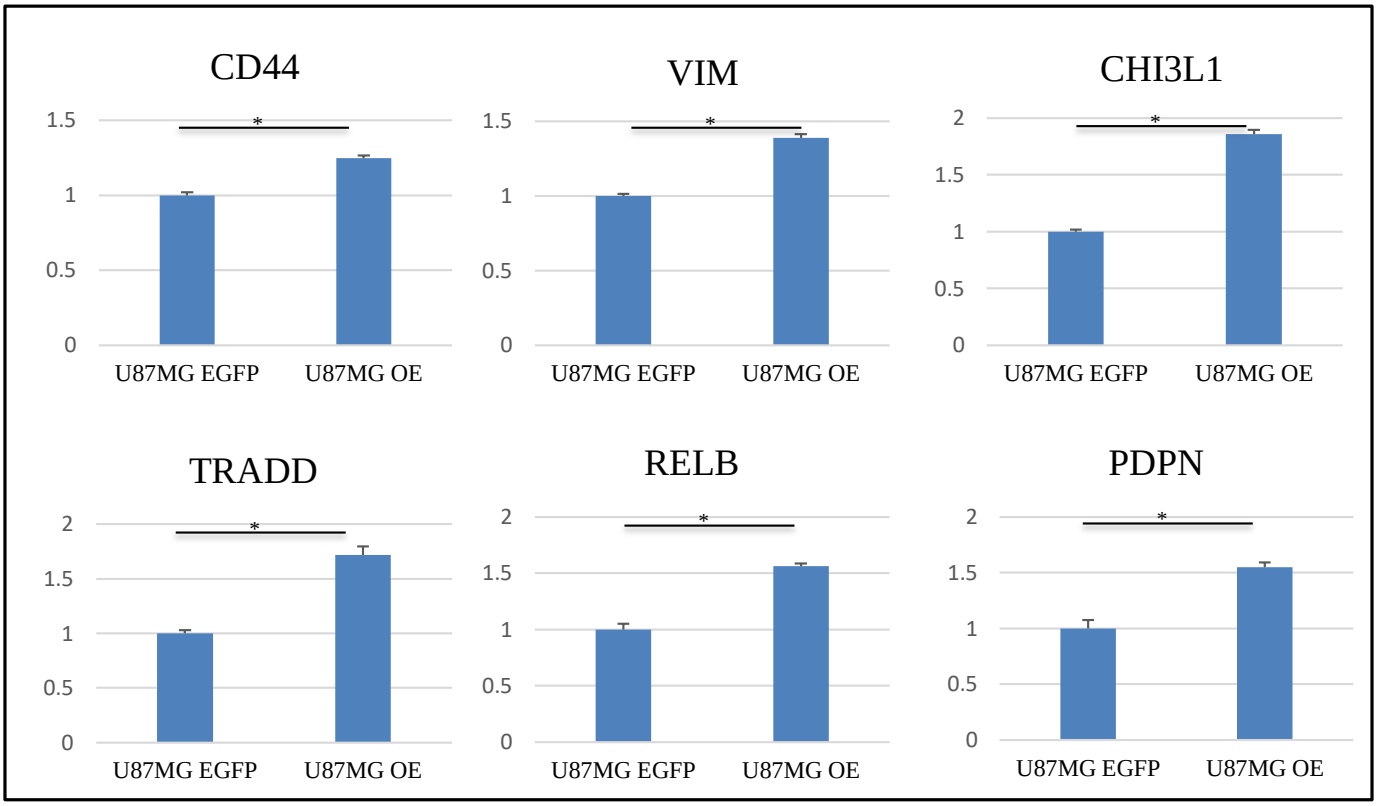


NES:-1.334
P-value:0.153
FDR:0.153

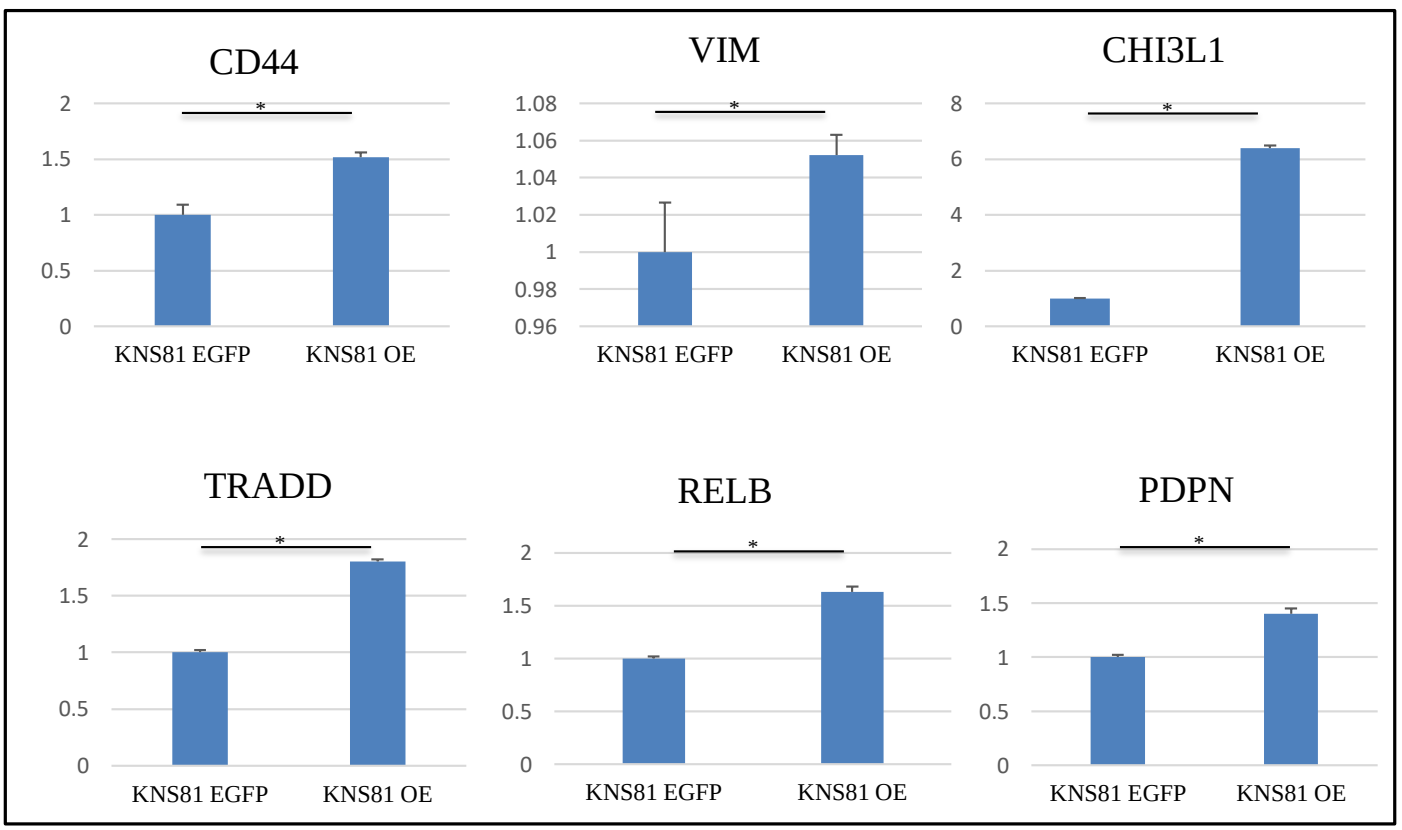
Supplementary Figure S1.

A, The distribution plot of FMNL1 immunohistochemical expression levels. **B,** Kaplan-Meier analysis of overall survival in TCGA GBM patients high or low expressing FMNL1. The former exhibited significantly poorer prognoses than the latter (P = 0.017). **C-E,** Representative immunohistochemical staining for FMNL1 in a primary (C) and recurrent tumour (D) are shown, and were compared by paired t-test (P < 0.01, E). **F-I,** Enrichment plot of FMNL1 mRNA expression in GBM specimens from TCGA for the gene sets VERHAAK_GLIOBLASTOMA_CLASSICAL,VERHAAK_GLIOBLASTOMA_NEURAL, PHILLIPS_GLIOBLASTOMA_MESENCHYMAL, and PHILLIPS_GLIOBLASTOMA_PRONEURAL. NES, normalized enrichment score; P, nominal P-value; FDR, False discovery rate.

U87MG



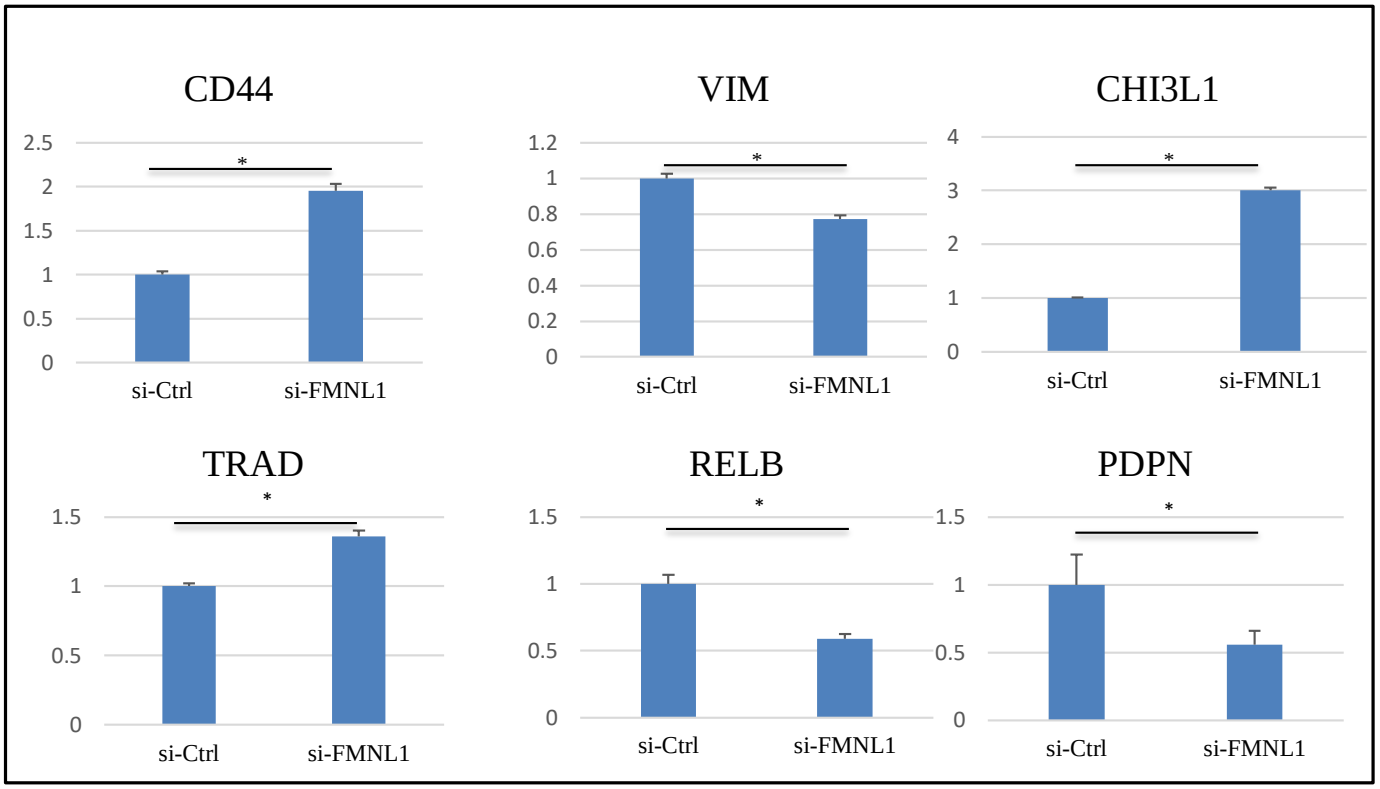
KNS81



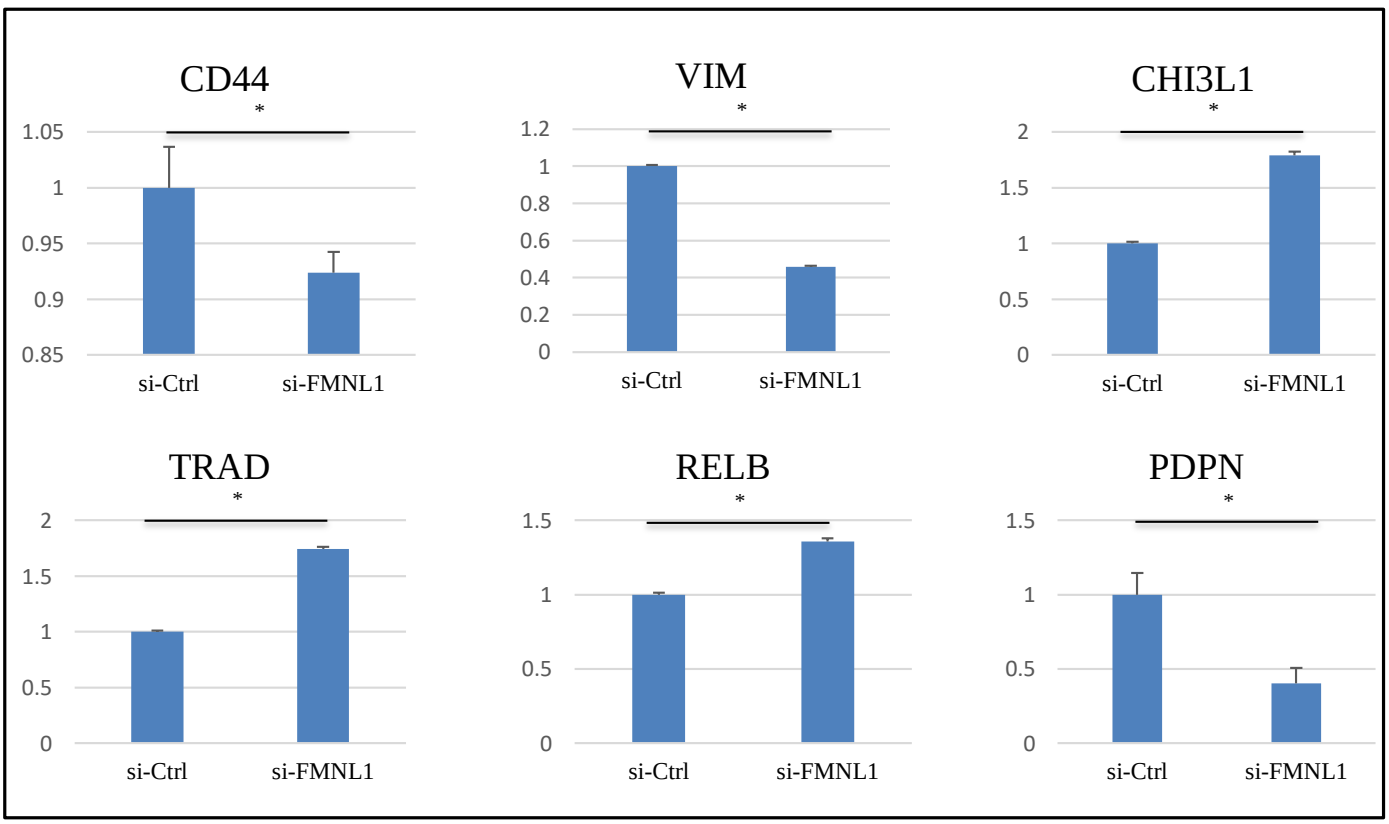
Supplementary Figure S2.

FMNL1 induces mesenchymal markers expression. Mesenchymal markers, measured by RT-PCR, were significantly upregulated in U87MG and KNS81 cells overexpressing FMNL1, compared with cells overexpressing EGFP. *$P < 0.01$

U251MG



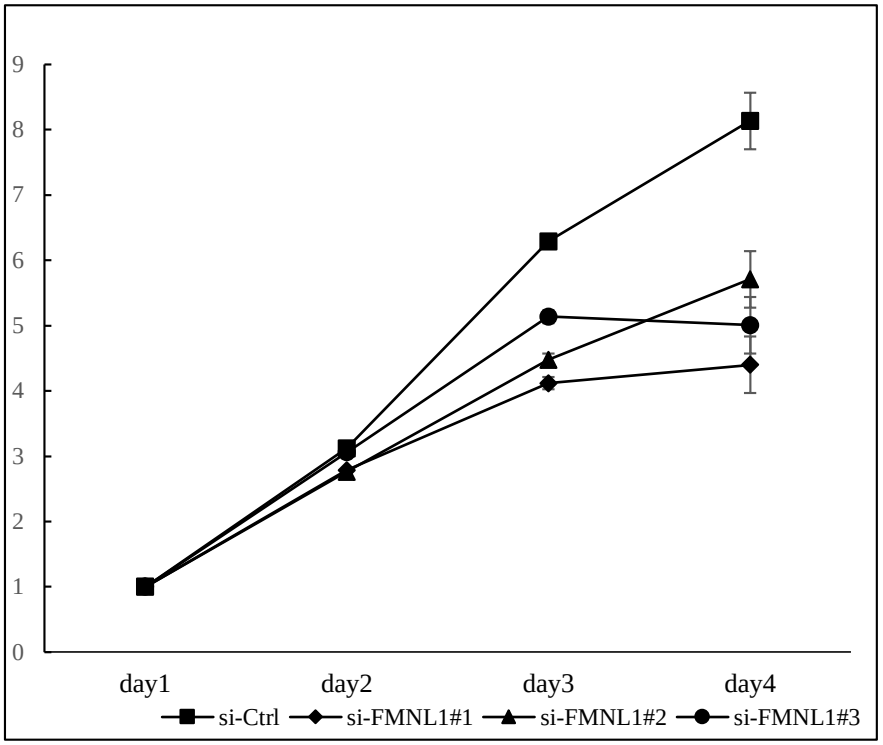
DBTR-05MG



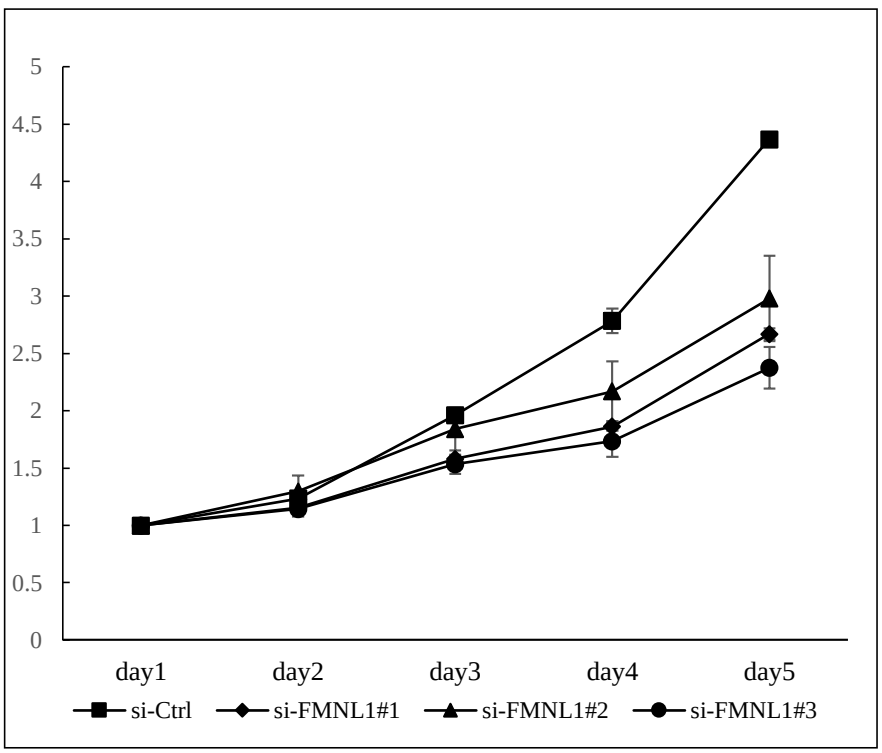
Supplementary Figure S3.

FMNL1 knockdown effect on mesenchymal markers. *$P < 0.01$

U251MG

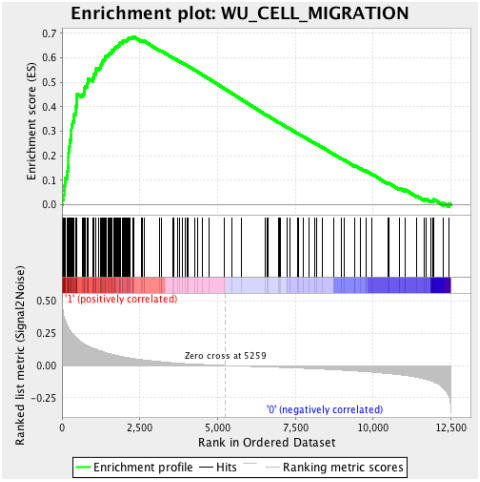


DBTRG-05MG

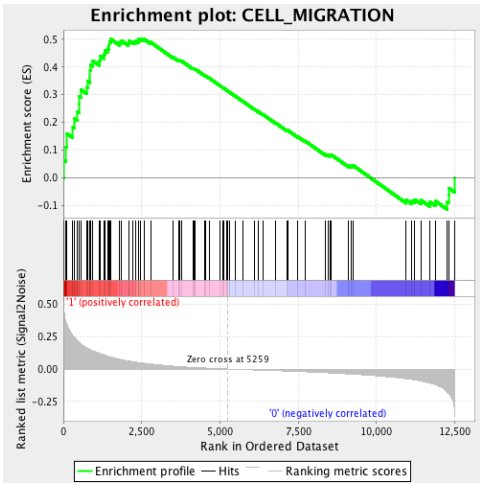


Supplementary Figure S4.

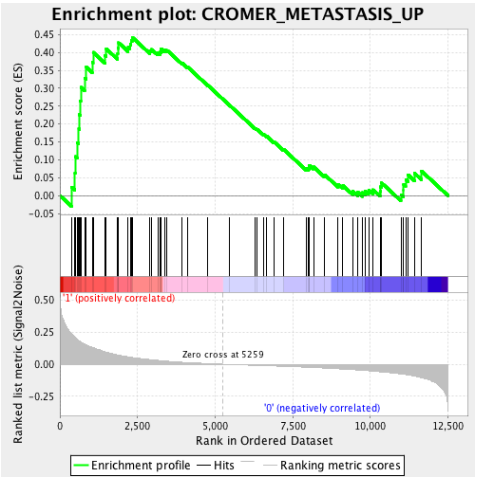
FMNL1 knockdown effect on GBM cell proliferation.
Cell viability was measured using the MTT assay.



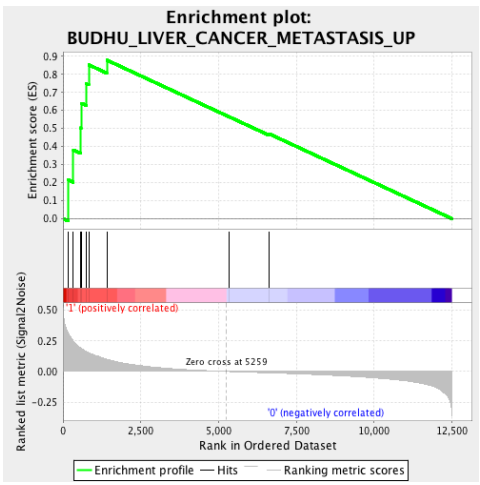
NES:1.616
P-value:0.0
FDR:0.054



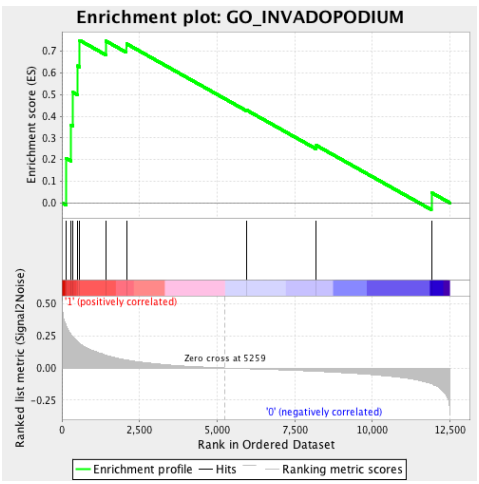
NES:1.522
P-value:0.014
FDR:0.053



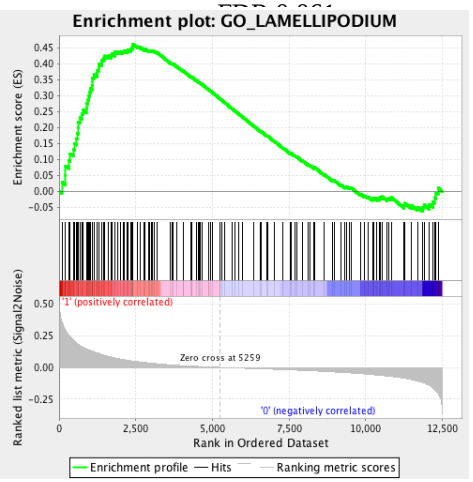
NES:1.623
P-value:0.014
FDR:0.061



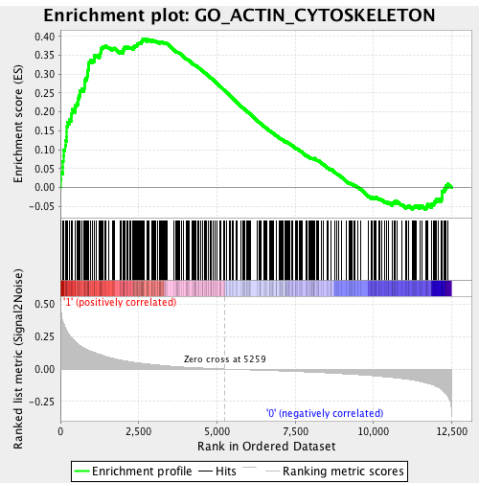
NES:1.553
P-value:0.004
FDR:0.052



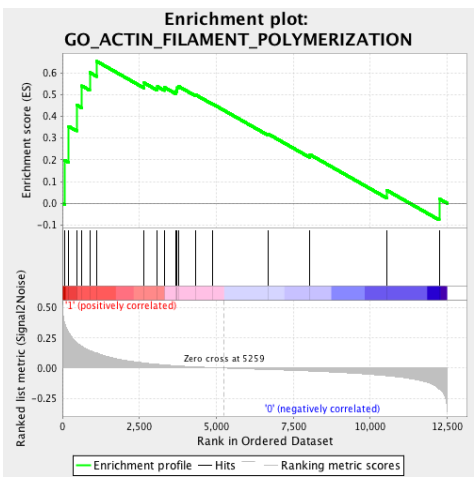
NES:1.388
P-value:0.068
FDR:0.108



NES:1.600
P-value:0.011
FDR:0.053



NES:1.556
P-value:0.002
FDR:0.055



NES:1.682
P-value:0.015
FDR:0.015

Supplementary Figure S5.

Enrichment plot of FMNL1 mRNA expression in TCGA GBM patients for the gene sets GO_LAMELLIPODIUM, KEGG_FOCAL_ADHESION, GO_INVADOPODIUM, BUDHU_LIVER_CANCER_METASTASIS_UP, CROMER_METASTASIS_UP, CELL_MIGRATION, WU_CELL_MIGRATION, GO_ACTIN_CYTOSKELETON, and GO_ACTIN_FILAMENT_POLYMERIZATION. NES, normalized enrichment score; P, nominal *P*-value; FDR, false discovery rate.