

ORIGINAL RESEARCH ARTICLE

Targeting the FN3K–Nrf2 axis: Discovery and pre-clinical evaluation of novel inhibitors for breast cancer therapy

Raw Image File

1. Western blot analysis of FN3K and Nrf2 expression in MCF-7 cells

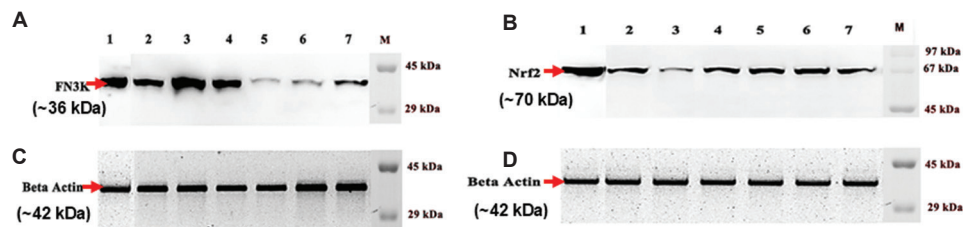


Figure R1. (A-D) Raw Western blot images showing protein expression of FN3K and Nrf2 in three biological replicates
Abbreviations: 1-DMF: 1-deoxy-1-morpholino-D-fructose; FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2
(The representative blot shown in Figures 9 and 10 of the main manuscript is derived from this raw blot.)

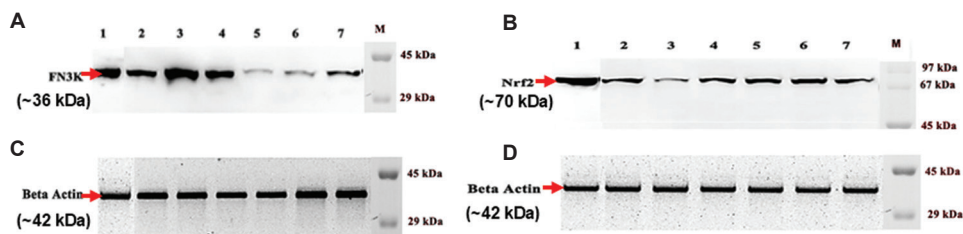


Figure R2. Raw Western blot images of FN3K and Nrf2 expression in MCF-7 cells (Replicate 2). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: 1-DMF; Lane 3: Amiloride; Lane 4: Ritonavir; Lane 5: Oxaliplatin; Lane 6: Capiasertib; and Lane 7: Lansoprazole
Abbreviations: 1-DMF: 1-deoxy-1-morpholino-D-fructose; FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

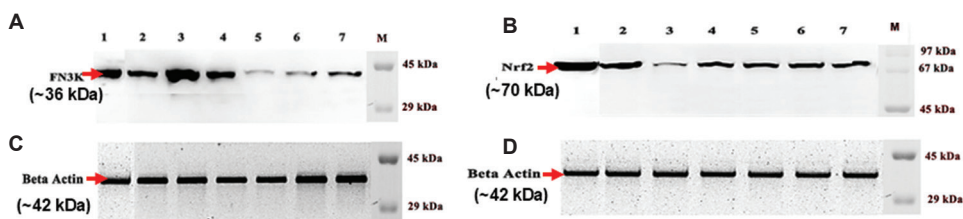


Figure R3. Raw Western blot images of FN3K and Nrf2 expression in MCF-7 cells (Replicate 3). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: 1-DMF; Lane 3: Amiloride; Lane 4: Ritonavir; Lane 5: Oxaliplatin; Lane 6: Capiasertib; and Lane 7: Lansoprazole
Abbreviations: 1-DMF: 1-deoxy-1-morpholino-D-fructose; FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

2. Western blot analysis of FN3K and Nrf2 expression in T-47D cells

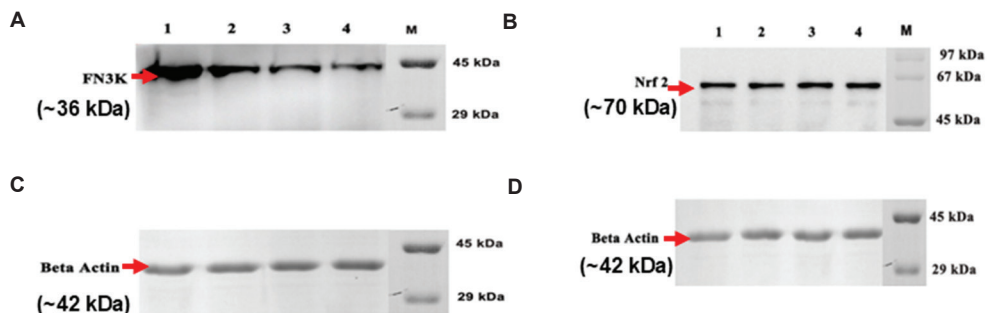


Figure R4. (A-D) Raw Western blot images showing protein expression of FN3K, Nrf2, and β -actin in three biological replicates
Abbreviations: 1-DMF: 1-deoxy-1-morpholino-D-fructose; FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2
(The representative blot shown in Figures 11 and 12 of the main manuscript is derived from this raw blot.)

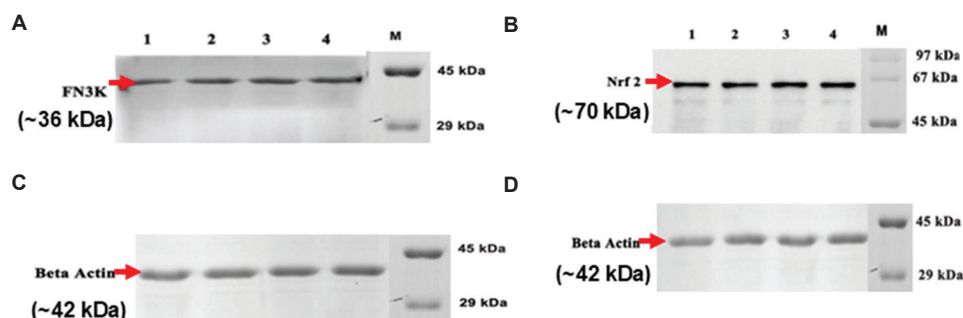


Figure R5. Raw Western blot images of FN3K and Nrf2 expression in T-47D cells (Replicate 2). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: Oxaliplatin; Lane 3: Capiivasertib; and Lane 4: Lansoprazole
Abbreviations: 1- FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

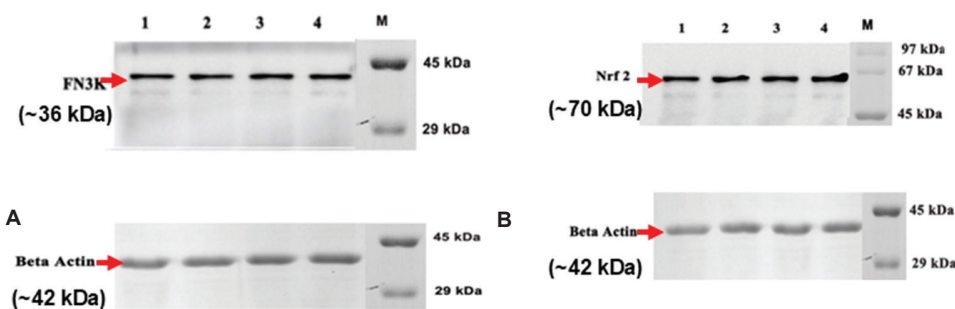


Figure R6. Raw Western blot images of FN3K and Nrf2 expression in T-47D cells (Replicate 3). (A) FN3K (~36 kDa); (B) Nrf2 (~70kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: Oxaliplatin; Lane 3: Capiivasertib; and Lane 4: Lansoprazole
Abbreviations: 1- FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

3. Western blot analysis of FN3K and Nrf2 expression in BT-474 cells

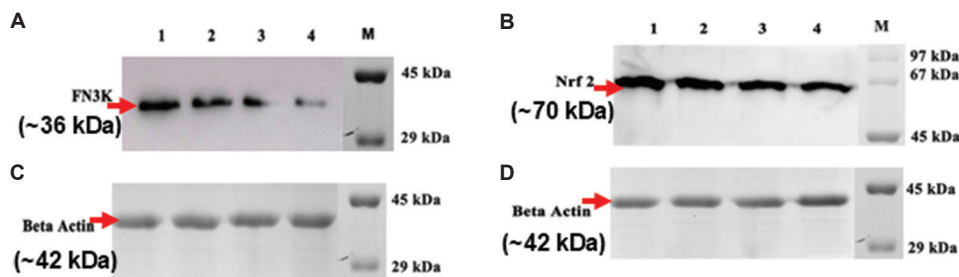


Figure R7. (A-D) Raw Western blot images showing protein expression of FN3K, Nrf2, and β -actin in three biological replicates
Abbreviations: 1-DMF: 1-deoxy-1-morpholino-D-fructose; FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2
(The representative blot shown in Figures 13 and 14 of the main manuscript is derived from this raw blot.)

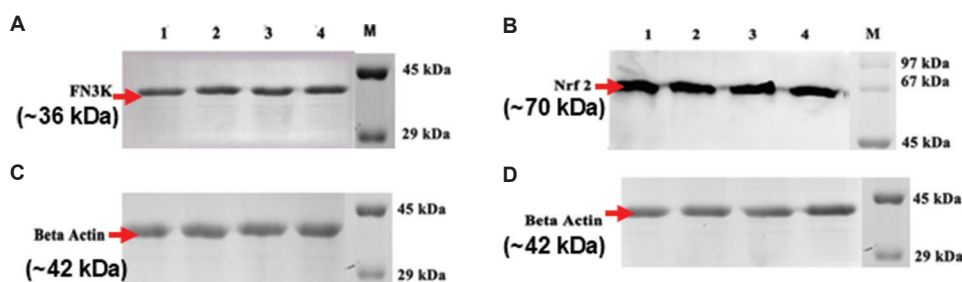


Figure R8. Raw Western blot images of FN3K and Nrf2 expression in BT-474 cells (Replicate 2). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: Oxaliplatin; Lane 3:Capivasertib; and Lane 4: Lansoprazole
Abbreviations: FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

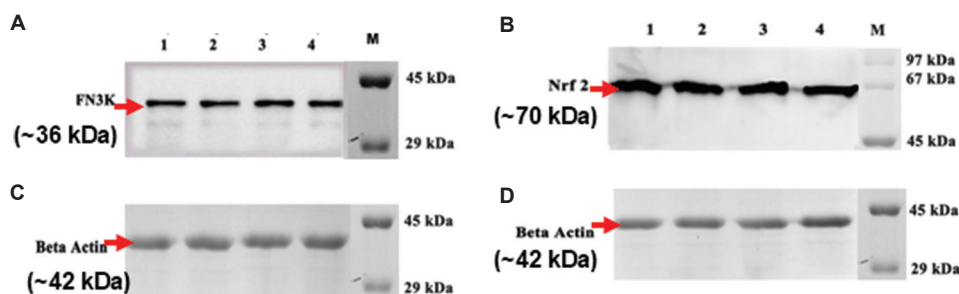


Figure R9. Raw Western blot images of FN3K and Nrf2 expression in BT-474 cells (Replicate 3). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: Oxaliplatin; Lane 3:Capivasertib; and Lane 4: Lansoprazole
Abbreviations: FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

4. Western blot analysis in Vero cells: Assessing specificity and off-target effects

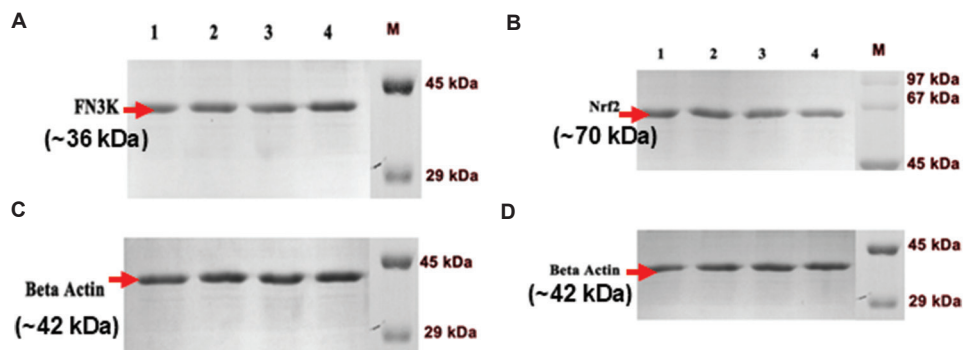


Figure R10. (A-D) Raw Western blot images showing protein expression of FN3K, Nrf2, and β -actin in three biological replicates
Abbreviations: 1-DMF: 1-deoxy-1-morpholino-D-fructose; FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2
(The representative blot shown in Figures 15 and 16 of the main manuscript is derived from this raw blot)

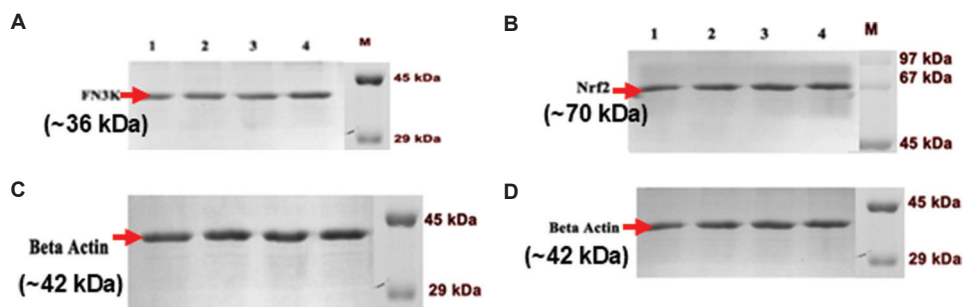


Figure R11. Raw Western blot images of FN3K and Nrf2 expression in Vero cells (Replicate 2). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: Oxaliplatin; Lane 3:Capivasertib; and Lane 4: Lansoprazole
Abbreviations: FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2

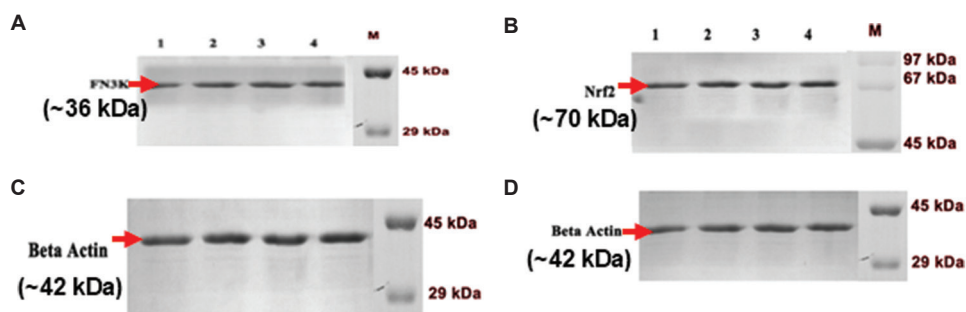


Figure R12. Raw Western blot images of FN3K and Nrf2 expression in Vero cells (Replicate 3). (A) FN3K (~36 kDa); (B) Nrf2 (~70 kDa); (C) Beta actin (~42 kDa) for FN3K; and (D) Beta actin (~42 kDa) for Nrf2. Lane 1: Untreated; Lane 2: Oxaliplatin; Lane 3:Capivasertib; and Lane 4: Lansoprazole
Abbreviations: FN3K: Fructosamine-3-kinase; Nrf2: Nuclear factor erythroid 2-related factor 2