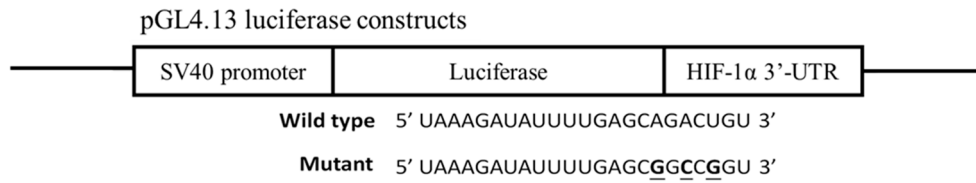


A.



B.

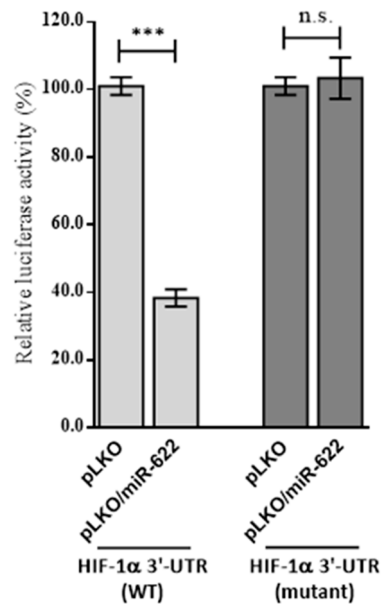


Figure S1: HIF-1α gene as a direct target of miR-622. (A) The diagram illustrates the luciferase reporter constructs. The three highlighted nucleotides indicate mutated sites in the HIF-1α mRNA, created through site-directed mutagenesis to result in mismatches with the complementary sequence of miR-622. (B) MDA-MB-231 cells were cultured in 24-well plates and transfected with 100 ng of either wild-type or mutated HIF-1α 3'-UTR constructs, in addition to pLKO/miR-622. The firefly luciferase/Renilla luciferase activity ratio of each sample was determined using a dual-luciferase reporter assay system. Each bar represents the mean \pm S.D. of results from three independent experiments; *** indicates a significance level of $p < 0.001$.

841 ATGGTTCTCT GCCCTGAAGG TGTAGCAAAA TTGTTTGATA GCTTTTGCAA AATTTACATA
 901 CCCAGCAGCC TCCCATCAG CTGAATAAGA ATTGCAATGT GGATGTGGCA GAGGCAATCA
 961 GGTATGTGGG GTTAGAAGAA GCTGTCCTGG TCATTCTGTT GCCACCCTCT CACTTGGAGA
 1021 ATTGCTGATCCAATGAATTC CTTAACATAA CTTTGAAAAC ACAGCGTTTT GCTCAGAACT
 1081 TCATGAATAA ACATCAAATT TTCACTAAAC AAAATAATTA AAGACCATAA GATCTTAGTT
 1141 ATAATACTTC ATAAATGGAA AAGCACTTTA TTGCCTGTAT GTATGTGGGC TCCTCTTTTA
 1201 GCAAGATATG AGCTAGGTGA AGTCTATGTG AAAGCTAAAG CAGATTTATTCAGT CAGAT
 1261 GCCAGACAAT TTTACCAGTT TAACTGAGAC TCAT ATTACTTAA ACTACA TGCTTGTTTT
 Forward primer HIF-1 α (A)
 1321 TTTGGTTACT GAGTAGTATA GGTCCCACTT GGATCAGCAA TTCTCAAAGT GAGAGGGTGG
 1381 CAATAGAATT A TTAAGTAA TTATTTGTGA TT GAGGTTG TTGCTTAGT ATTACT GT
 HIF-1 α (B) Reverse primer
 1441 CACTGTTTTA CATGTTATTT AATAATAC AGTTATTTAA AAGTGGAAG ATTCCAAGGC
 1501 AAGTAGGGGA CCTGTCCTT TGAGAAAAAT TTATGGTGGT AAAAATATTT TCTTTTGTGA
 1561 AAGAGTCACT GATATACAAT GTCCCCCAG GGTGTAAGCC TTGGTATTTA TCTATTTTAA
 1621 TTAAAGAGTA CTCTGCCTGT CTAGTCGTGG CTAACCTAAA AGAAGTGGGT ATCTTGGTGA
 1681 GAAGTTCACA AGGTTGGTAG CCATAGCTGA GTTGGTGGA TTGACTCAAG CTCTAGTCAG

Figure S2. HIF-1 α binding sites in the pri-miR-30a promoter region. A schematic illustration showcases the ChIP-seq binding motif of HIF-1 α within the promoter region of the primary miRNA transcript of miR-30 (pri-miR-30a), retrieved from the NCBI website (<https://www.ncbi.nlm.nih.gov/nucore/6522967>). The DNA sequences for the primer set targeting the HIF-1 α -binding regions (highlighted in yellow) are included. The resulting PCR fragments are 181 base pairs (bps) in length and encompass the HIF-1 α binding site.