

**Table S1: Primers sequence for qPCR**

Gene	Sequence (5'-3')
SOD1	TGGTTTGCGTCGTAGTCTCC
	CTTCGTCGCCATAACTCGCT
$\beta$ -Actin	GCACTCTTCCAGCTTCCTT
	GTTGGCGTACAGGTCTTTGC
PDHE1A	TTCTCAGAAGCCGGCAAGC
	AGCACTGTTGTGACAGGAGG
CPT1A	CCTCCAGTTGGCTTATCGTG
	TTCTTCGTCTGGCTGGACAT
FASN	AAGGACCTGTCTAGGTTTGATGC
	TGGCTTCATAGGTGACTTCCA
PDK1	TCACAGAGGAGCGTTTCTGG
	TCACTGATCCTTCCTGCTTCC
ACLY	AGTCCAGGGCCGATGAGGTGG
	GAGGGTGGTGCTCTTTCCTTGCAG
MCAD	TGGATAACCAACGGAGGAAAAG
	CTGGGGTATCTGCTTCCACA
E-cadherin	ATTTTCCCTCGACACCCGAT
	TCCCAGGCGTAGACCAAGA
Vimentin	CGGGAGAAATTGCAGGAGGA
	AAGGTCAAGACGTGCCAGAG
Twist	GTCCGCAGTCTTACGAGGAG
	GCTTGAGGGTCTGAATCTTGCT

## Supplementary Figure 1

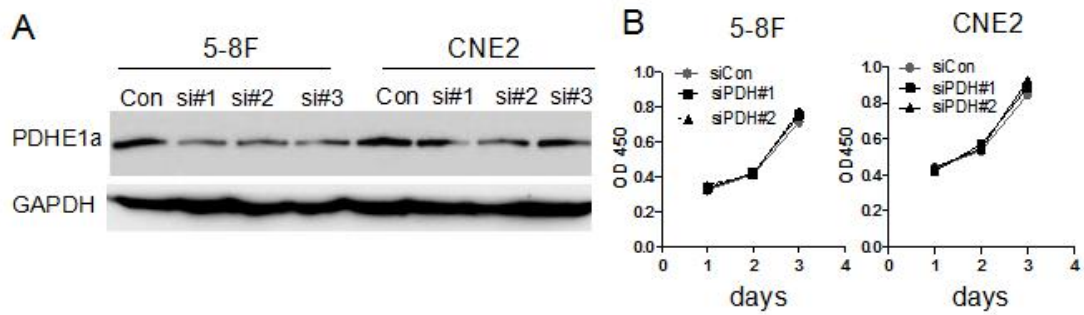
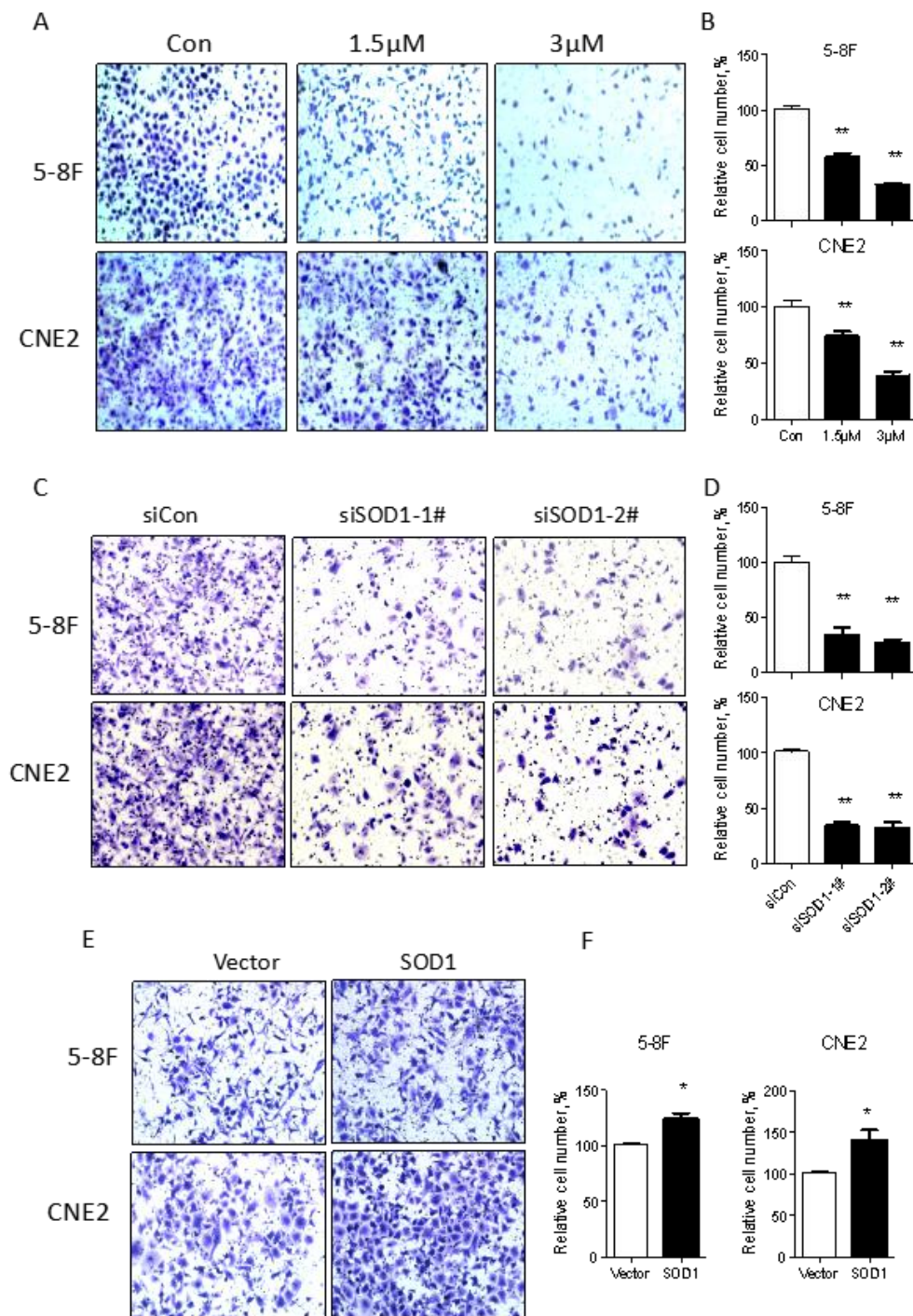


Fig.S1: **Effects of PDH on cell viability of NPC cells.** **A.** Western blot analysis of pyruvate dehydrogenase subunit E1A in 5-8F and CNE2 cells transfected with three specific siRNAs or control siRNA for 24h. **B.** Cell viability in 5-8F and CNE2 cells with PDHE1A knocked down.

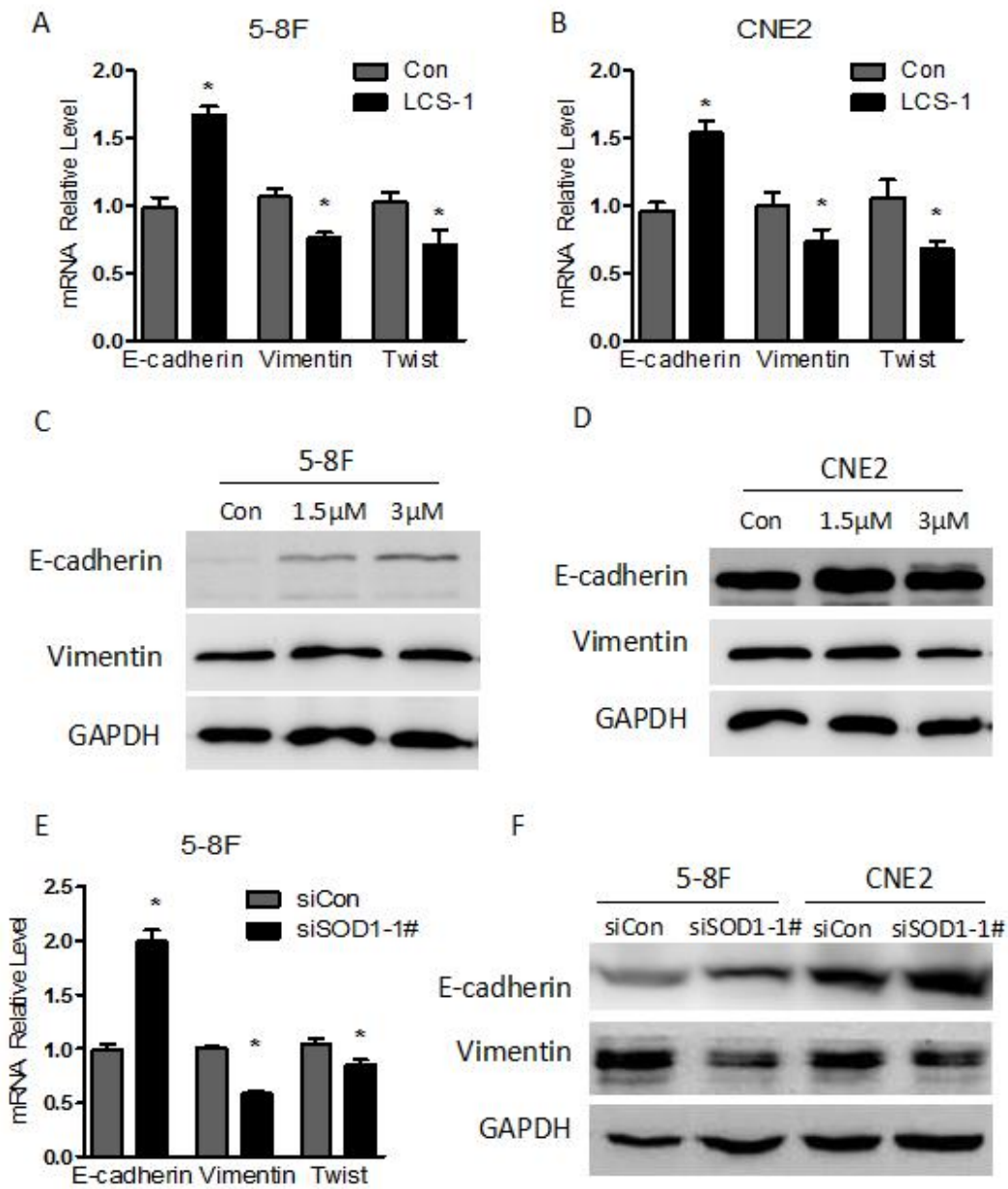
## Supplementary Figure 2



**Fig.S2: Effects of SOD1 on cell migration of NPC cells. A&B.** Migration ability of 5-8F and CNE2 cells was remarkably downregulated in LCS-1 groups compared with control group. **C&D.** Migration ability of 5-8F and CNE2 cells was remarkably downregulated in SOD1 knockdown groups compared with control group. **E&F.** Elevated SOD1 levels increased migration ability of 5-8F and CNE2 cells. All error bars represent the S.D. of three replicates from two independent experiments.

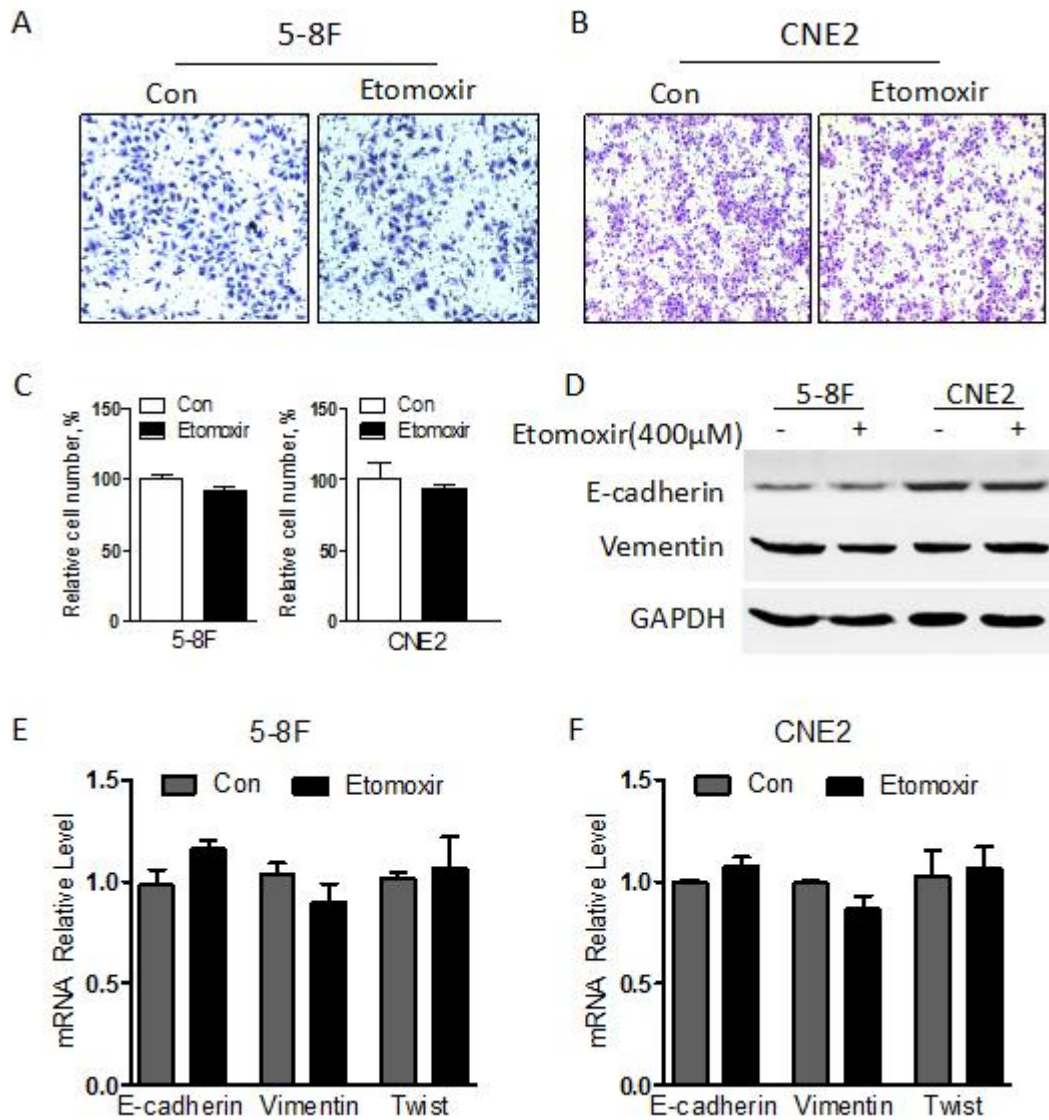
\* $p < 0.05$ , \*\* $p < 0.01$ .

### Supplementary Figure 3



**Fig.S3: Effects of SOD1 on EMT makers of NPC cells.** Expression of vimentin and twist at the mRNA level was remarkably downregulated and the mRNA level of E-cadherin was upregulated in LCS-1 groups compared with control group in 5-8F(A) and CNE2 (B) cell for 24h. C&D. Immunoblotting analysis of E-cadherin and vimentin expression in 5-8F and CNE2 cells treated with LCS-1 for 24h. E. Expression of vimentin and twist at the mRNA level was remarkably downregulated and the mRNA level of E-cadherin was upregulated in SOD1 knockdown group compared with control group in 5-8F cell. F. Immunoblotting analysis of E-cadherin and vimentin expression in 5-8F and CNE2 cells treated with SOD1 siRNA for 24h. All error bars represent the S.D. of three replicates from two independent experiments.;\* $p < 0.05$

### Supplementary Figure 4



**Fig.S4: Effects of Etomoxir on cell migration of NPC cells.** Migration ability of 5-8F (A) and CNE2 cells (B) was shown in etomoxir group compared with control group for 24h. C. Quantification of the number of migration of NPC cells. D. western blot analysis of E-cadherin and vimentin expression in 5-8F and CNE2 cells treated with 400  $\mu$ M etomoxir for 24h. E&F. Expression of E-cadherin, vimentin and twist at the mRNA level in 5-8F(A) and CNE2 (B) cell for 24h.