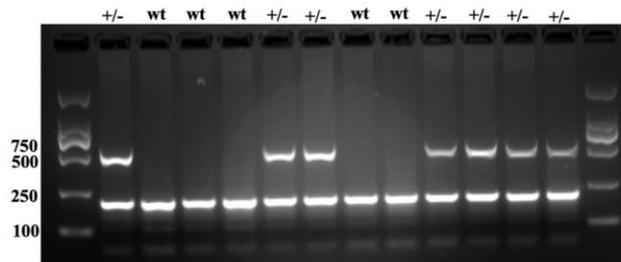
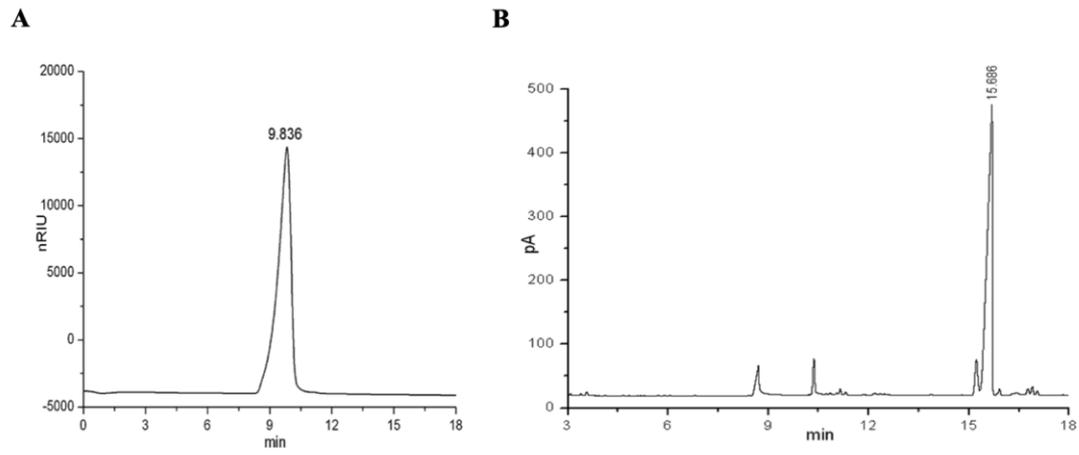


**Figure S1**



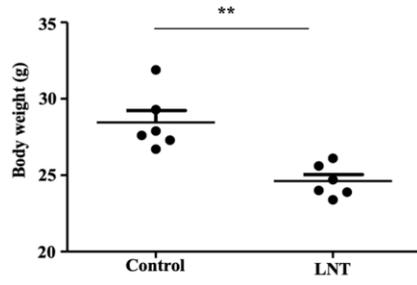
**Figure S1. Genotype identification of MMTV-PyMT transgenic mice. Heterozygote (size: 556 bp and 200 bp); Wild type (size: 200 bp).**

**Figure S2**



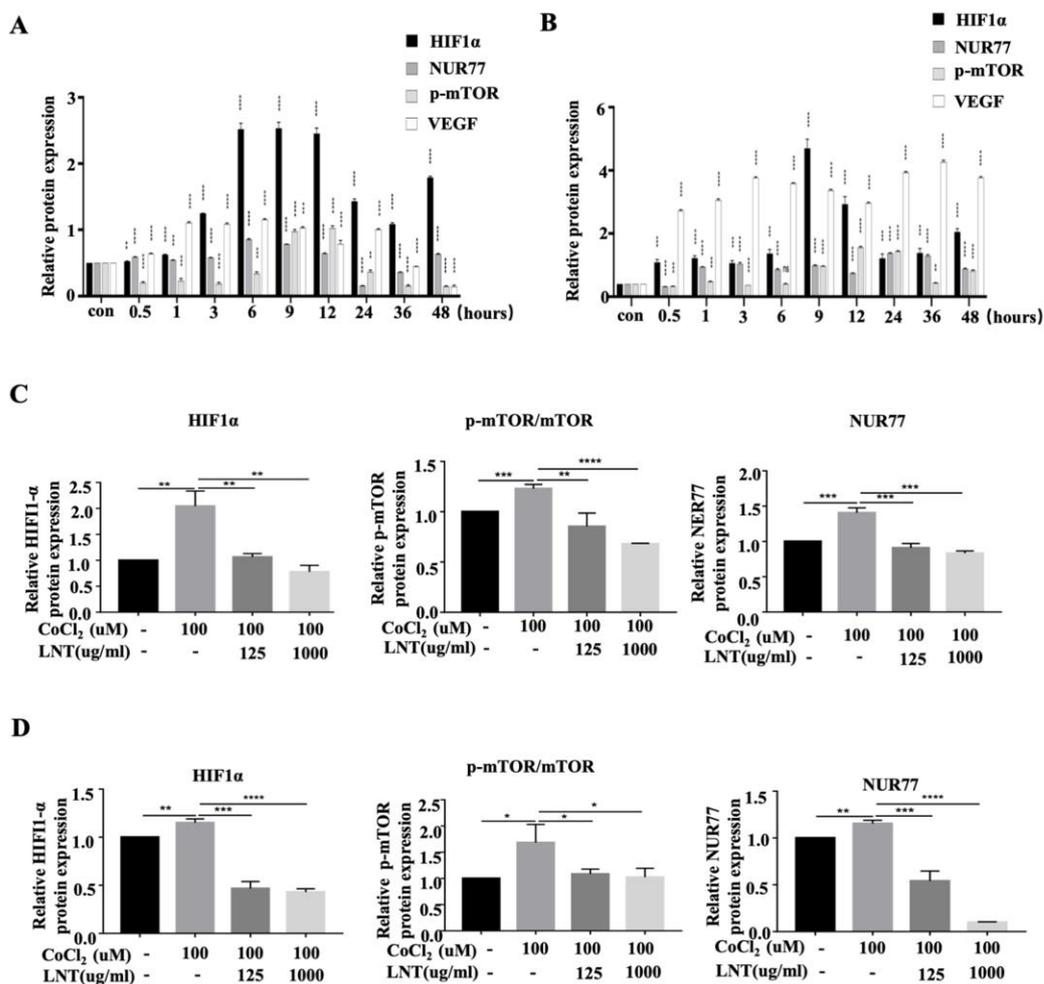
**Figure S2. Identification of Lentinan (LNT).** Composition (A) and monosaccharide content (B) in the mushroom polysaccharide was analyzed by HPLC/MS.

**Figure S3**



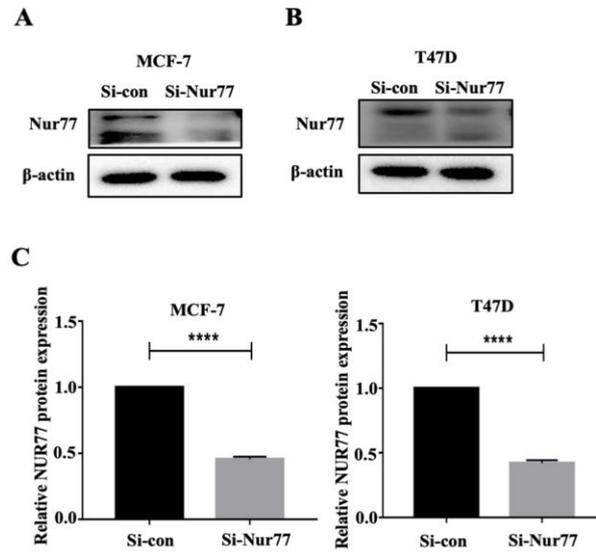
**Figure S3. Body weight of each animal at the time of sacrifice.**

Figure S4



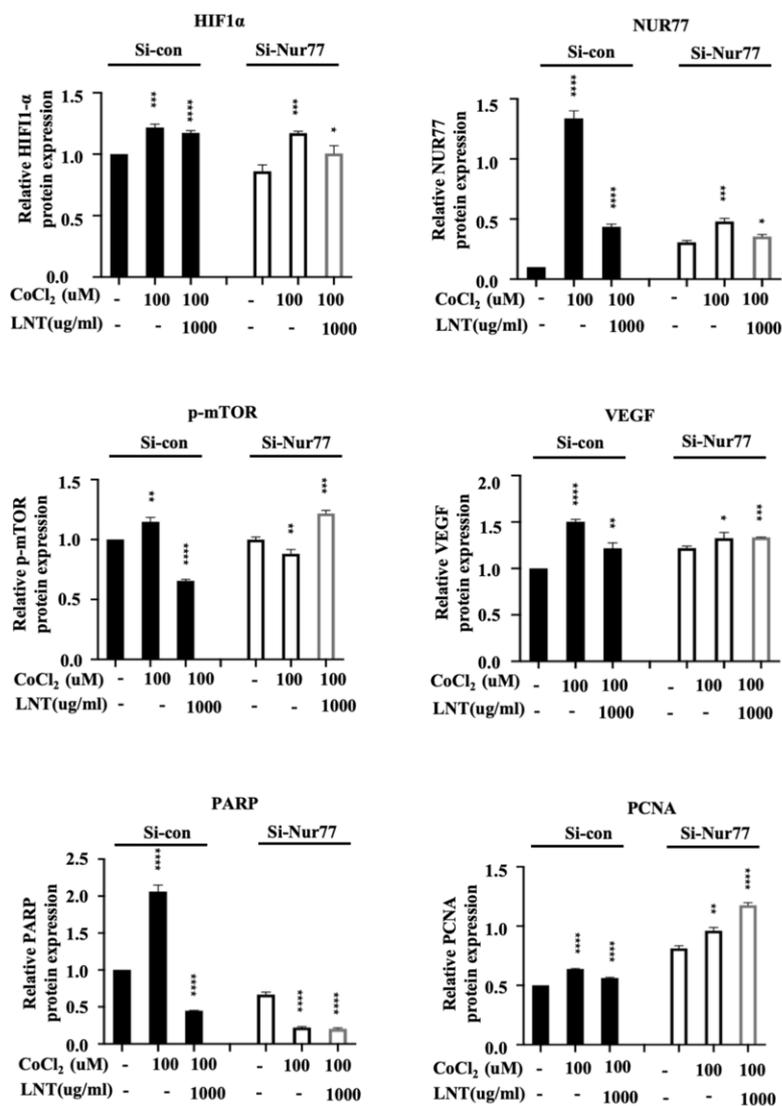
**Figure S4. Quantitative analysis of protein expression in Figure 3.** Quantitative analysis of HIF-1 $\alpha$ , Nur77, VEGF and p-mTOR/mTOR ratio in panel A (A) and panel B(B) of Figure 3. Quantitative analysis of HIF-1 $\alpha$ , Nur77 and p-mTOR/mTOR ratio in panel C (C) and panel D(D) of Figure 3.

**Figure S5**



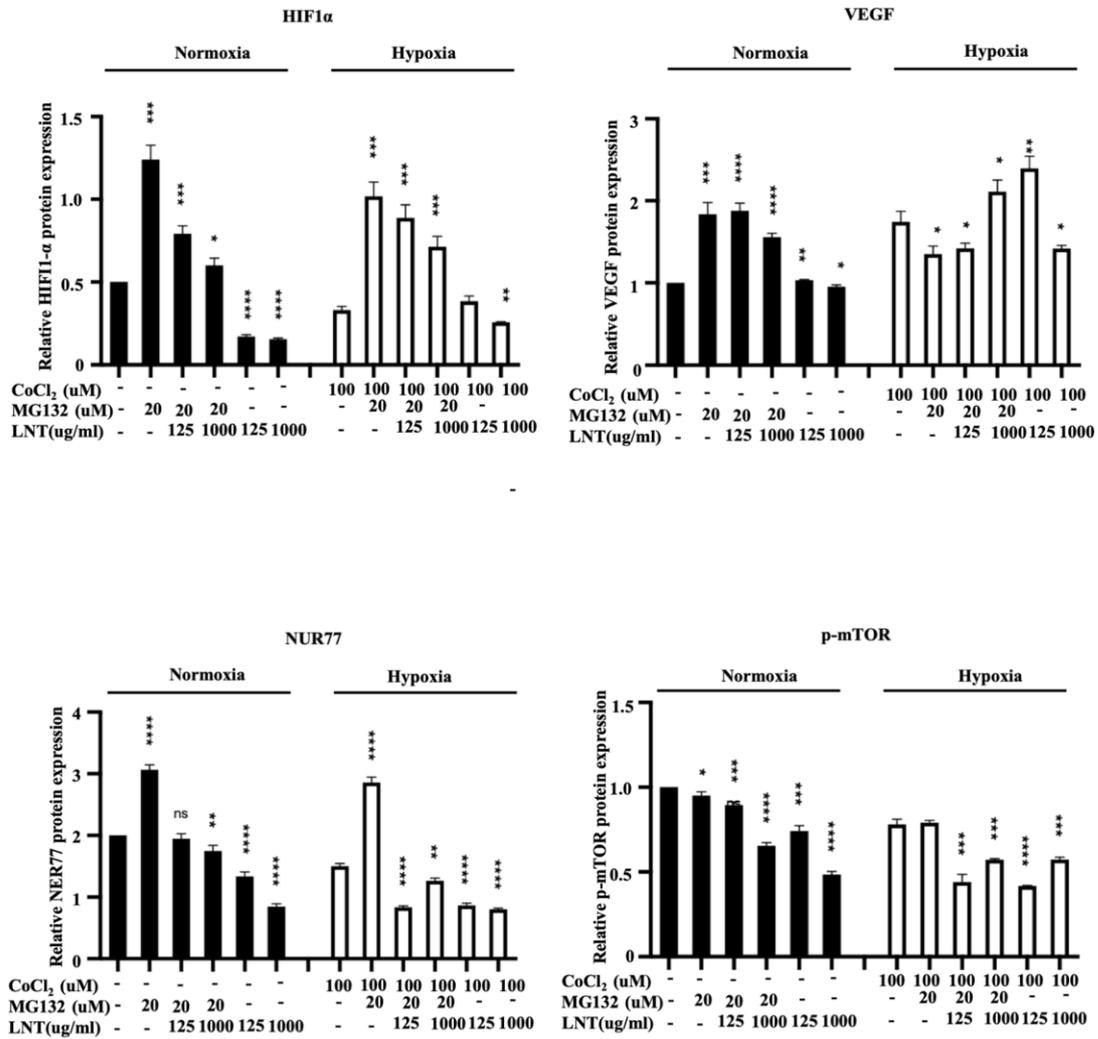
**Figure S5. Identification of knockdown efficiency of Nur77.** Verification of knockdown efficiency of Nur77 in (A) MCF-7 and (B) T47D cells was determined by utilizing western Blotting assay after transfecting for 48h. (C) Quantitative analysis of protein expression in panel A and B. \*\*\*\*,  $P < 0.0001$ .

Figure S6



**Figure S6. Quantitative analysis of protein expression in Figure 4.** Quantitative analysis of HIF-1 $\alpha$ , Nur77, VEGF, p-mTOR/mTOR ratio, PARP and PCNA in panel A of Figure 4.

**Figure S7**



**Figure S7. Quantitative analysis of protein expression in Figure 4.** Quantitative analysis of HIF-1 $\alpha$ , Nur77, VEGF and p-mTOR/mTOR ratio in panel B of Figure 4.

**Table S1. Body weight at the time of sacrifice.**

|                 | Con          |      |      |      |      |      | LNT            |      |      |      |      |      |
|-----------------|--------------|------|------|------|------|------|----------------|------|------|------|------|------|
| Body weight (g) | 29.3         | 31.9 | 27.3 | 27.6 | 27.9 | 26.7 | 24             | 26.1 | 23.4 | 25.6 | 23.9 | 24.7 |
| Mean with SD    | 28.45±0.7753 |      |      |      |      |      | 24.62±0.4301** |      |      |      |      |      |

**Table S2. Weight of each pair of tumors.**

|                  | <b>Con</b> |              |     |     |     |     |     | <b>LNT</b> |                |     |     |     |     |  |  |
|------------------|------------|--------------|-----|-----|-----|-----|-----|------------|----------------|-----|-----|-----|-----|--|--|
| Tumor weight (g) | t1         | 1.3          | 1.4 | 0.3 | 0.5 | 0.9 | 0.5 | 0.3        | 0.7            | 0.4 | 0.4 | 1.0 | 0.3 |  |  |
|                  | t2         | 1.1          | 2.0 | 0.4 | 1.0 | 1.6 | 0.9 | 0.5        | 0.6            | 0.5 | 0.6 | 0.6 | 0.3 |  |  |
|                  | t3         | 1.0          | 1.5 | 0.5 | 1.0 | 1.9 | 0.5 | 0.7        | 0.6            | 0.5 | 0.5 | 0.4 | 0.4 |  |  |
|                  | t4         | 0.6          | 1.3 | 0.3 | 0.5 | 0.6 | 0.5 | 0.3        | 0.4            | 0.5 | 0.3 | 0.2 | 0.4 |  |  |
|                  | t5         | 0.3          | 1.5 | 0.3 | 0.6 | 0.7 | 0.7 | 0.4        | 0.4            | 0.5 | 0.3 | 0.3 | 0.3 |  |  |
| Total weight (g) |            | 4.2          | 7.7 | 1.7 | 3.6 | 5.6 | 3.1 | 2.2        | 2.7            | 2.5 | 2.2 | 2.6 | 1.7 |  |  |
| Mean with SD     |            | 4.325±0.8554 |     |     |     |     |     |            | 2.304±0.1497** |     |     |     |     |  |  |

t1: tumor of 1# mammary gland, t2: tumor of 2# mammary gland, t3: tumor of 3# mammary gland, t4: tumor of 4# mammary gland, t5: tumor of 5# mammary gland. 1# to 5# represented the different site of mice mammary gland (five pairs of mammary gland per mice).

**Table S3. The maximum diameter of each tumor.**

|                     | Con |     |     |              |     |     |     | LNT          |     |     |     |     |     |
|---------------------|-----|-----|-----|--------------|-----|-----|-----|--------------|-----|-----|-----|-----|-----|
|                     | t1  | 1.6 | 1.1 | 1.8          | 1   | 1.2 | 1   | 1.5          | 1.5 | 0.8 | 0.9 | 0.7 | 0.9 |
|                     | t2  | 2   | 1.7 | 1.2          | 1.5 | 1.1 | 1.2 | 1.2          | 1.3 | 1   | 0.9 | 1   | 0.9 |
| Tumor diameter (cm) | t3  | 1.5 | 1.7 | 1.6          | 1.5 | 1.5 | 1.4 | 1.2          | 1.4 | 1   | 1   | 1.1 | 1.3 |
|                     | t4  | 1.5 | 1   | 1            | 1   | 1   | 0.8 | 0.5          | 0.5 | 0.5 | 0.5 | 0.9 | 0.9 |
|                     | t5  | 1.5 | 0.5 | 0.6          | 0.7 | 0.7 | 0.4 | 0.7          | 0.9 | 0.9 | 0.8 | 0.7 | 0.8 |
| Total diameter (cm) |     | 8.1 | 6   | 6.2          | 5.7 | 5.5 | 4.8 | 5.1          | 5.6 | 4.2 | 4.1 | 4.4 | 4.8 |
| Mean with SD        |     |     |     | 6.049±0.5778 |     |     |     | 4.7±0.3985** |     |     |     |     |     |

t1: tumor of 1# mammary gland, t2: tumor of 2# mammary gland, t3: tumor of 3# mammary gland, t4: tumor of 4# mammary gland, t5: tumor of 5# mammary gland. 1# to 5# represented the different site of mice mammary gland (five pairs of mammary gland per mice)