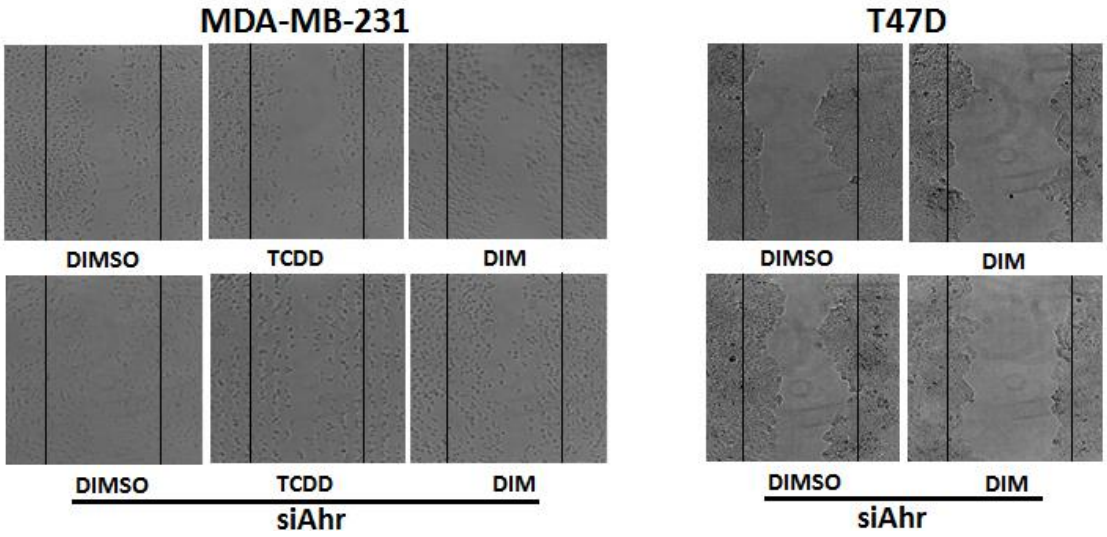

Figure S1

Ahr partially mediates the inhibitory effects of DIM on migration of MDA-MB-231 and expansion of T47D. The inhibitory effects of 10 nmol/L TCDD or 25 μmol/L DIM on migration of MDA-MB-231 and expansion of T47D cells were examined by wound healing assay. Inhibition of Ahr using siAhr blocked the effect of TCDD on the migration of MDA-MB-231 cells, while partially inhibited the anti-expansion effect of DIM on both cell lines compared with siNS-transfected control.

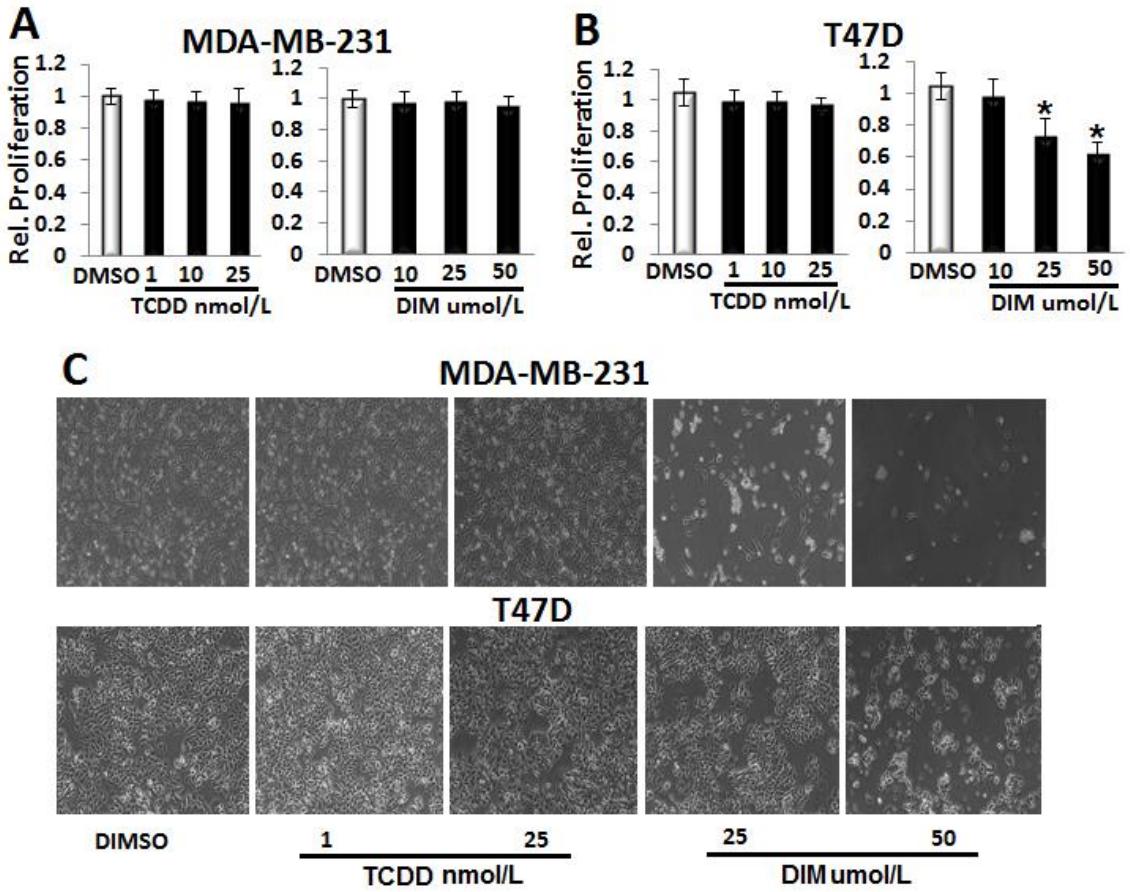

Figure S2

DIM suppresses proliferation and adhesion of breast cancer cells. (A and B) Cell proliferation was quantified by MTT assay. Only DIM shows inhibitory effects on proliferation of T47D. (C) DIM suppresses cell adhesion of MDA-MB-231 and T47D cells 48 h after treatment and single PBS wash. Data in A and B are shown as mean ± SD. *; $P<0.05$, significantly different from the DMSO-treated control.

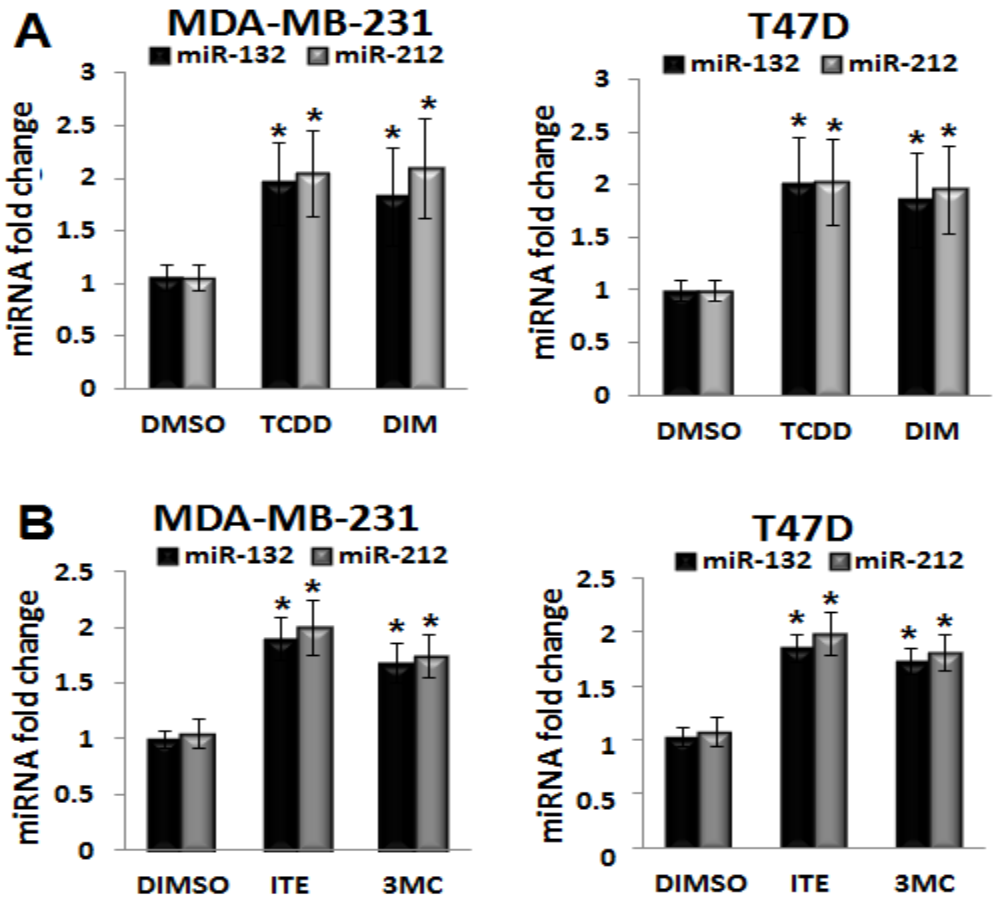

Figure S3

Ah agonists induce miR-212/132 cluster in breast cancer cells. (A) TCDD and DIM induces miR-212/132 expression 24 h after treatment. (B) ITE and 3MC induce miR-212/132 transcription 48 h after treatment. Data are shown as mean ± SD. *; $P<0.05$, significantly different from the DMSO-treated control.

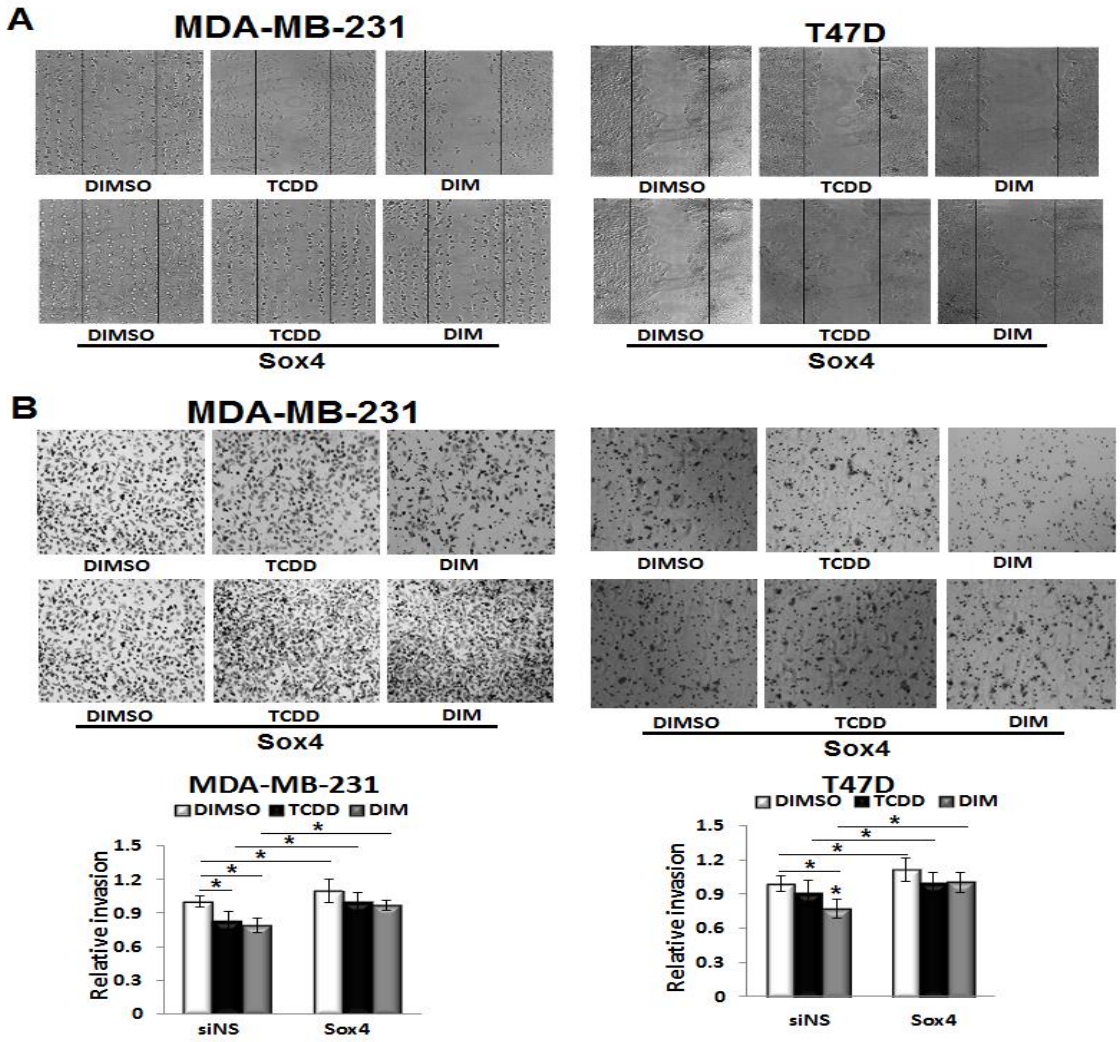

Figure S4

The inhibitory effects of Ahr agonists on migration and invasion of breast cancer cells are SOX4-mediated. (A) Over-expression of SOX4 mitigated the inhibitory effects of TCDD and DIM on migration of MDA-MB-231 and T47D cells as examined by wound healing assay. (B) Over-expression of SOX4 mitigated the inhibitory effects of TCDD and DIM on MDA-MB-231 and T47D cells as examined by Boyden chamber assay. Data are shown as mean ± SD. *; $P<0.05$, significantly different from the siNS-transfected control.

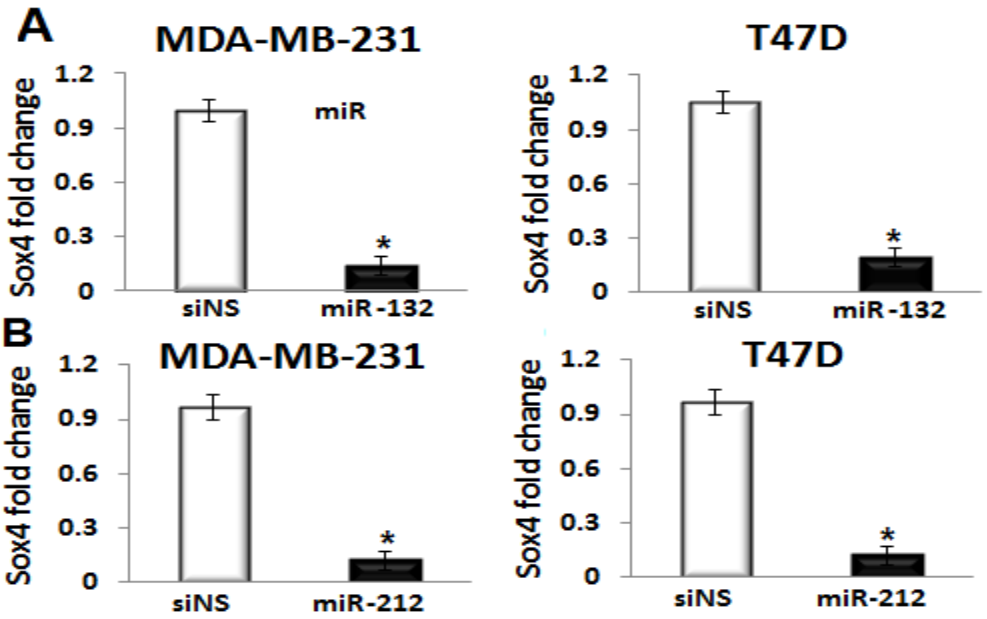

Figure S5

Reciprocal correlation between miR-212/132 cluster and SOX4 mRNA in breast cancer cells. MDA-MB-231 and T47D cells were transfected with mimics of (A) miR-132 and (B) miR-212, and SOX4 mRNA was quantified by real-time PCR. Data are shown as mean ± SD. *; $P<0.05$, significantly different from the siNS-transfected control.

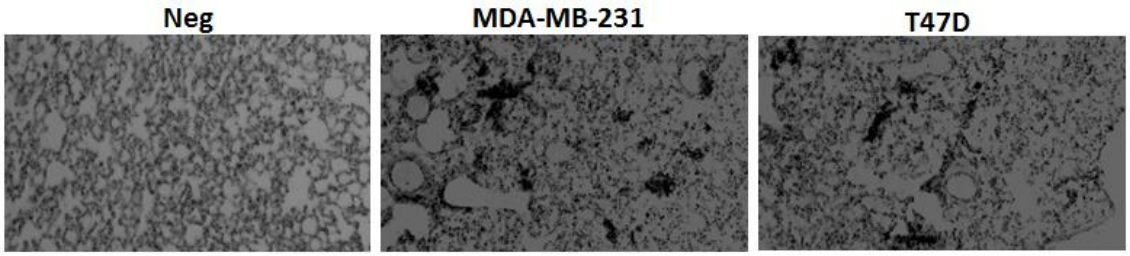

Figure S6

Injection of MDA-MB-231 or T47D into the nipple fat pad of athymic mice, resulted in formation of pulmonary nodules that were adequate to represent spontaneous metastasis. Shown are representative H&E staining of the lung metastases from MDA-MB-231- or T47D-injeted mice.