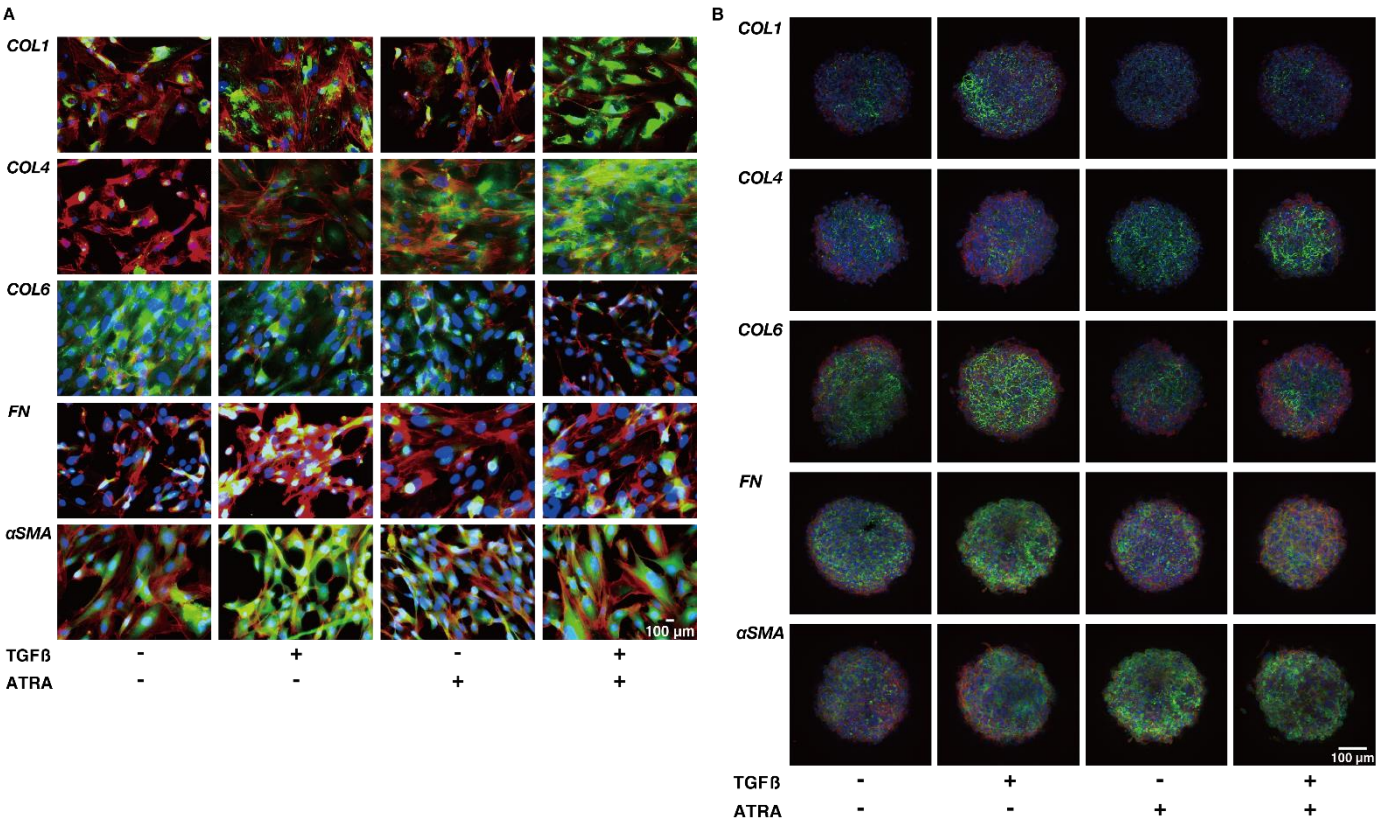

Supplemental Figure S1. Effects of ATRA on the immunolabeling of ECM proteins of the TGF-β2 untreated or treated 2D and 3D HTM cells.

2D and 3D HTM cells untreated and treated with TGF-β2 (TGFβ, 5 ng/ml) were subjected to immunolabeling for *COL 1*, *COL 4*, *COL 6*, *FN* and αSMA in the presence or absence of 10 μ M ATRA. Experiments were repeated in duplicate (n=5 in each, total n=10). Representative merged images of ECM staining (green) with DAPI (blue) and Phalloidin (red) are shown in panels A (2D) and B (3D).

Supplemental Table S1 Sequences of primers of qPCR

		Sequence	Exon Location	RefSeq Number	Product Length (bp)
human RPLP0*1	Probe Primer2 Primer1	5'-/56-FAM/CCCTGTCTT/ZEN/CCCTGGGCATCAC/3IABkFQ/-3' 5'-TCGTCTTTAAACCCTGCGTG-3' 5'-TGTCTGCTCCCACAATGAAAC-3'	2-3	NM_001002	143
human COL1A1*1	Probe Primer2 Primer1	5'-/56-FAM/TCGAGGGCC/ZEN/AAGACGAAGACATC/3IABkFQ/-3' 5'-GACATGTTCAGCTTTGTGGAC-3' 5'-TTCTGTACGCAGGTGATTGG-3'	1-2	NM_000088	115
human COL4A1*1	Probe Primer2 Primer1	5′-/56-FAM/TCATACAGA/ZEN/CTTGGCAGCGGCT/3IABkFQ/-3′ 5′-AGAGAGGAGCGAGATGTTCA-3′ 5′-TGAGTCAGGCTTCATTATGTTCT-3′	51-52	NM_001845	142
human COL6A1*1	Probe Primer2 Primer1	5′-/56-FAM/CAGGTTTCG/ZEN/GTCACAGCGGTAGT/3IABkFQ/-3′ 5'-CCTCGTGGACAAAGTCAAGT-3' 5'-GTGAGGCCTTGGATGATCTC-3'	2-3	NM_001848	114
human FN1*1	Probe Primer2 Primer1	5′-/56-FAM/TACAGCTTA/ZEN/TTCTCCCTCGCCCAG/3IABkFQ/-3′ 5'-CGTCCTAAAGACTCCATGATCTG-3' 5'-ACCAATCTTGTAGGACTGACC-3'	3-4	NM_212482	129
human αSMA*1	Probe Primer2 Primer1	5'-/56-FAM/AGACCCTGT/ZEN/TCCAGCCATCCTTC/3IABkFQ/-3' 5'-AGAGTTACGAGTTGCCTGATG-3' 5'-CTGTTGTAGGTGGTTTCATGGA-3'	8-9	NM_001613	105
human TIMP1*1	Probe Primer2 Primer1	5′-/56-FAM/TCAACCAGA/ZEN/CCACCTTATACCAGCG/3IABkFQ/-3′ 5′-CCTTCTGCAATTCCGACCT-3′ 5′-GCTTGGAACCCTTTATACATCTTG-3′	2-4	NM_003254	121
human TIMP2*1	Probe Primer2 Primer1	5′-/56-FAM/TCTCATTGC/ZEN/AGGAAAGGCCGAGG/3IABkFQ/-3′ 5′-GACGTTGGAGGAAAGAAGGA-3′ 5′-TGTGGTTCAGGCTCTTCTTC-3′	3-4	NM_003255	133
human TIMP3*1	Probe Primer2 Primer1	5′-/56-FAM/CCTCCTTTA/ZEN/CCAGCTTCTTCCCCAC/3IABkFQ/-3′ 5′-CCTTCTGCAACTCCGACATC-3′ 5′-CGGTACATCTTCATCTGCTTGA-3′	1-3	NM_000362	112
human TIMP4*1	Probe Primer2 Primer1	5′-/56-FAM/ACTGAGGAC/ZEN/CTGACCAGTCAAGAGA/3IABkFQ/-3′ 5′-GGTTTGAGAAAGTCAAGGATGTTC-3′ 5′-GTTGCACAGATGGATGAAGAC-3′	3-4	NM_003256	149
human MMP2*1	Probe Primer2 Primer1	5′-/56-FAM/TTCTGTCCC/ZEN/CATGAAGCCCTGTTC/3IABkFQ/-3′ 5′-TCCACCACCTACAACTTTGAG-3′ 5′-GTGCAGCTGTCATAGGATGT-3′	6-7	NM_004530	140
human MMP9*1	Probe Primer2 Primer1	5′-/56-FAM/CCAGGAGGA/ZEN/AAGGCGTGTGC/3IABkFQ/-3 5′-ACATCGTCATCCAGTTTGGTG-3′ 5′-CGTCGAAATGGGCGTCT-3′	3-4	NM_004994	123
human MMP14*1	Probe Primer2 Primer1	5′-/56-FAM/TTGTTCCTC/ZEN/AAAGTGCCTGTTTGCTC/3IABkFQ/-3 5′-TTCGCCGACTAAGCAGAAG-3′ 5′-CTTGAATTCCTAGACCGCTGT-3′	1-1	NM_004995	114
human ZO1*1	Probe Primer2 Primer1	5'--/56-FAM/ACTGAATTA/ZEN/CCTTCACCATGTGCTCCC/3IABkFQ/-3' 5'-CGCGTCTCTCCACATACATTC-3' 5'-GCTGGCTTATTCTGAGATGGA-3'	24-25	NM_ 175610	117
human CLDN11*1	Probe Primer2 Primer1	5'--/56-FAM/TGACTGCCT/ZEN/GCTTTGTGCTACGT/3IABkFQ/-3' 5'-CATGGATTTCAGAACCTGCATT-3' 5'-GGAAGAACAGTCAGCAGCA-3'	2-3	NM_ 001185056	129
human Grp78*2	Forward Reverse	5'-CATCACGCCGTCCTATGTCG-3' 5'-CGTCAAAGACCGTGTTCTCG-3'		NM_005347	215
human GRP94*2	Forward Reverse	5'-CTGGGACTGGGAACTTATGAATG-3' 5'-TCCATATTCGTCAAACAGACCAC-3'		NM_003299	152
human XBP*2	Forward Reverse	5'-AGTAGCAGCTCAGACTGCCA-3' 5'-CCTGGTTCTCAACTACAAGGC-3'		NM_005080	313
human sXBP*2	Forward Reverse	5'-GGTCTGCTGAGTCCGCAGCAGG-3' 5'-GGGCTTGGTATATATGTGG-3'		AB076384	97
human CHOP*2	Forward Reverse	5'-GGAGAACCAGGAAACGGAAAC-3' 5'-TCTCCTTCATGCGCTGCTTT-3'		NM_004083	69

*1 Taqman probes (IDT, Coralville, IA, USA). *2 SYBR probes (IDT, Coralville, IA, USA).