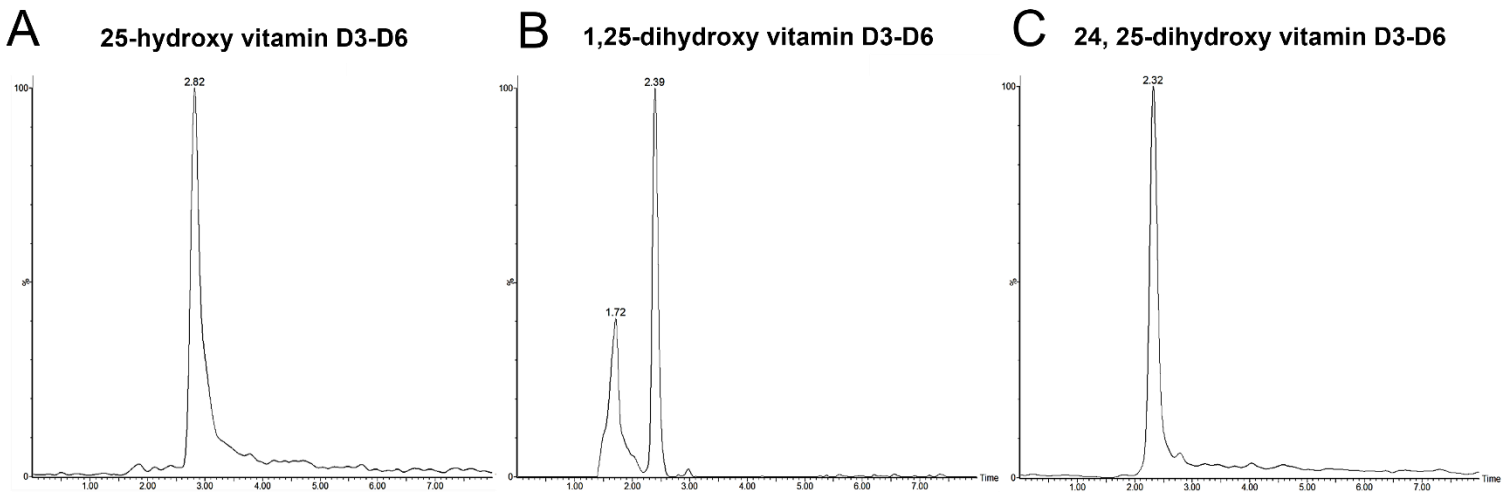
Supplementary Methods

Supplemental Table S1: Gene specific primers.

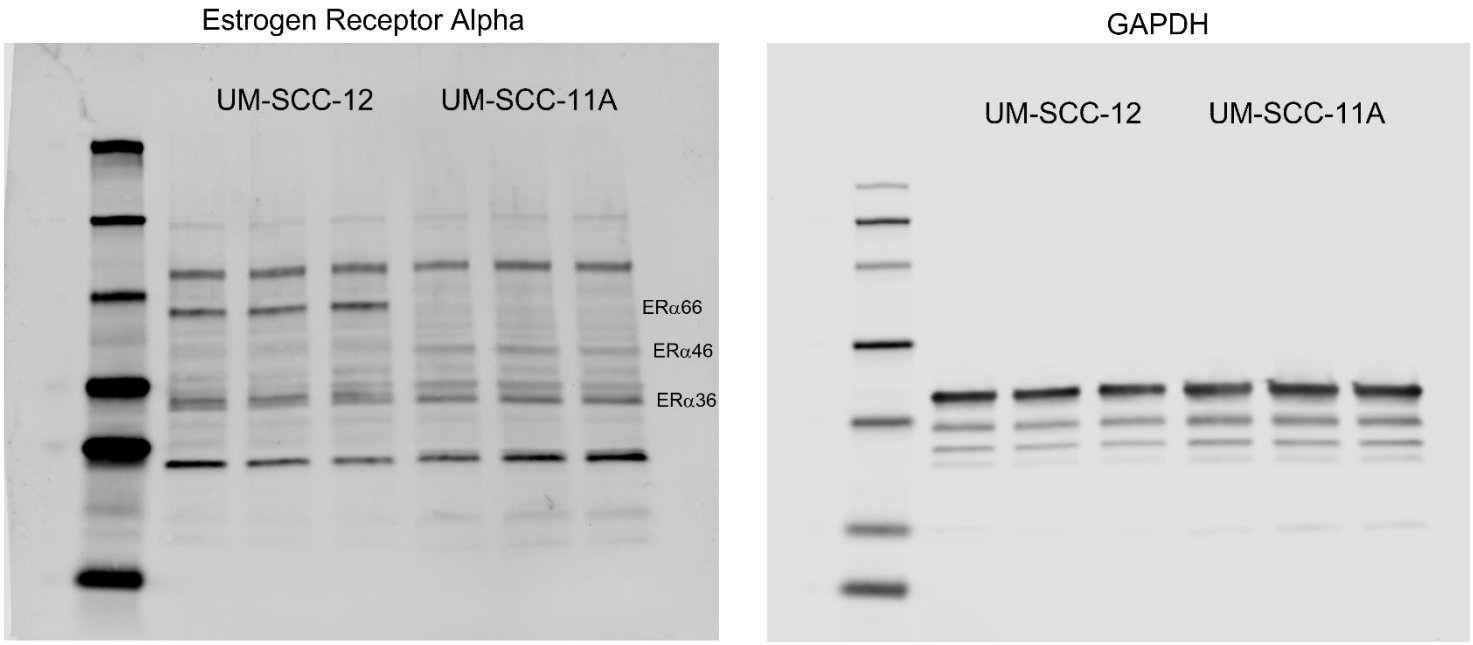
GENE	FORWARD	REVERSE
GAPDH	GCTCTCCAGAACATCATCC	TGCTTCACCACCTTCTTG
Human ERα66	TGCCTGGAGTGATGTTTAAGC	ACGGGAGCAAGTGCAGTC
Human ERα66/46	TGCGTCGCCTCTAACCTCG	TCCCAGATGCTTTGGTGTGG
Human ERα36	TCCTCGTGTCTAAAGCCTCTG	AAAATGTCCCCACGTCCACA
Human ESR2	CCTCCTATGTAGACAGCCACCA	TGGCGCAACGGTTCCCACTAA
Human GPR30	TTCAGCAGTGCCGTGTAGA	GTGTGCAGCTCCCGAGTC
Human VDR	CTGCTTGTCAAAAGGCGGC	ACCCAAAGGCTTCTGGTCC
Human BAX	GACGAACTGGACAGTAACATGG	AAAGTAGAAAAGGGCGACAACC
Human BCL2	Hs_BCL2-1-SG QuantiTect Primer #249900	
Human CYP24A1	GACATCCAGGCCACAGACAA	ACCACCATCTGAGGCGTATT
Human CYP27B1	AGAGTTGCTATTGGCGGGAG	AGAACAGTGGCTGAGGGGTA
Rat CYP24A1	TCATCTCCCATTCGGCATCG	TCTGGTCCTTGAAGTTCGCC
Rat CYP27B1	CCATCGAGTCCAACTGCCTT	AGGGTCGGCCACATAAACTG

Supplemental Figure S1



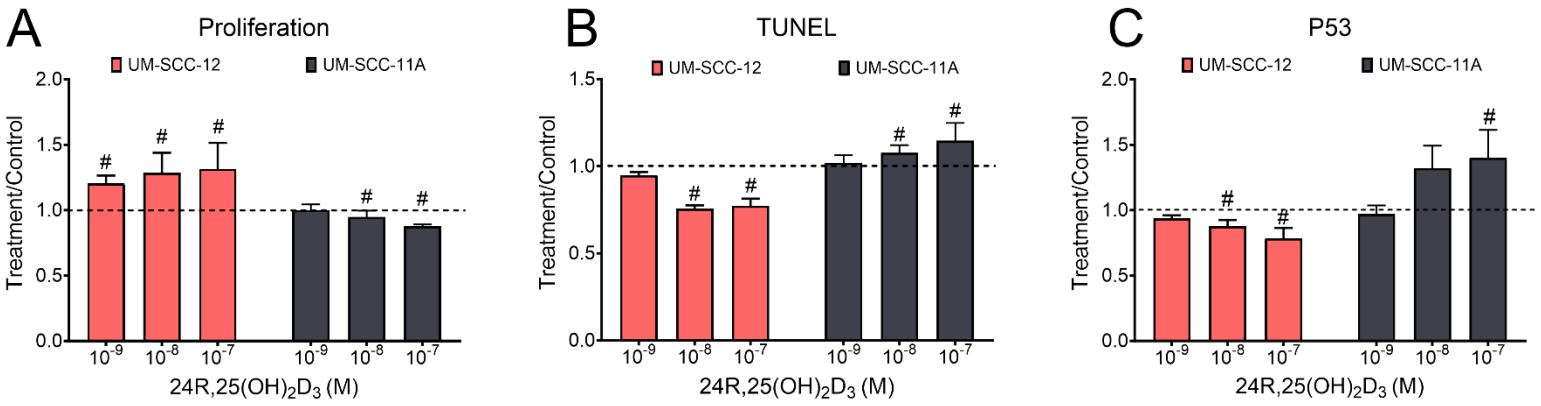
Supplemental Figure S1: Calibration curves. The calibration curve of 25-hydroxyvitamin d3-d6 (**A**), 1,25-dihydroxyvitamin d3-d6 (**B**), and 24,25-dihydroxyvitamin d3-d6 (**C**) used to create standards.

Supplemental Figure S2



Supplemental Figure S2: Original western blots of estrogen receptor alpha protein levels in UM-SCC-12 and UM-SCC-11A cells.

Supplemental Figure S3



Supplemental Figure S3: Analysis of 24R,25$(OH)_2D_3$ effect on tumorigenesis. Treatment over control analysis of UM-SCC-12 and UM-SCC-11A cell proliferation after treatment with 24R,25$(OH)_2D_3$ (**A**). Treatment over control analysis of UM-SCC-12 and UM-SCC-11A cells treated with 24R,25$(OH)_2D_3$ and assessed for TUNEL (**B**). P53 analysis of UM-SCC-12 and UM-SCC-11A cells after treatment with 24R,25$(OH)_2D_3$ (**C**). Data are presented as the mean ± standard error of 3 independent experiments. Groups labeled with a "#" are statistically different compared to the vehicle control by Wilcoxon matched-pairs signed rank test with p-values ≤0.05 determined as significant.