

Table S5: Pathway maps for Day 21

| | | BMP-2 | | TGF-β1 | | BMP-2 and TGF-β1 | |
|--|---------------|-----------|---|-----------|---|------------------|---|
| Maps | Min (p-Value) | p-value | Genes from Active Data | p-value | Genes from Active Data | p-value | Genes from Active Data |
| Development_Regulation of epithelial-to-mesenchymal transition (EMT) | 7.960E-12 | 3.099E-11 | IL-1 beta, PDGF-R-beta, EGF, HGF, ACTA2, MMP-2, TGF-beta 3, TGF-beta 1, TNF-alpha | 7.960E-12 | IL-1 beta, PDGF-R-beta, EGF, ACTA2, MMP-2, WNT, TGF-beta 3, TGF-beta 1, TNF-alpha | 1.283E-11 | IL-1 beta, PDGF-R-beta, EGF, ACTA2, MMP-2, WNT, TGF-beta 3, TNF-alpha, TGF-beta 1 |
| Transcription_Role of VDR in regulation of genes involved in osteoporosis | 2.507E-08 | 2.507E-08 | IL-1 beta, IFN-gamma, COL1A1, RUNX2, IGF-1, Osteocalcin, TNF-alpha | 1.647E-04 | IL-1 beta, IFN-gamma, IGF-1, TNF-alpha | 9.938E-06 | IL-1 beta, IFN-gamma, RUNX2, Osteocalcin, TNF-alpha |
| Transcription_Androgen Receptor nuclear signaling | 4.528E-08 | 3.428E-06 | EGF, MMP-2, IGF-1, TGF-beta 1, Beta-catenin | 4.528E-08 | EGF, MMP-2, IGF-1, WNT, TGF-beta 1, Beta-catenin | 2.160E-06 | EGF, MMP-2, WNT, TGF-beta 1, Beta-catenin |
| Development_TGF-beta-dependent induction of EMT via RhoA, PI3K and ILK. | 5.189E-08 | 1.237E-07 | ACTA2, SMURF1, TGF-beta 3, TGF-beta 1, Actin, Beta-catenin | 5.189E-08 | ACTA2, SMURF1, TGF-beta 3, TGF-beta 1, Actin, Beta-catenin | 7.036E-08 | ACTA2, SMURF1, TGF-beta 3, TGF-beta 1, Actin, Beta-catenin |
| Development_TGF-beta-dependent induction of EMT via MAPK | 5.929E-08 | 4.270E-06 | TGF-beta, MMP-2, FAK1, TGF-beta 3, TGF-beta 1 | 5.929E-08 | ITGB1, TGF-beta, MMP-2, FAK1, TGF-beta 3, TGF-beta 1 | 8.038E-08 | ITGB1, TGF-beta, MMP-2, FAK1, TGF-beta 3, TGF-beta 1 |
| Some pathways of EMT in cancer cells | 9.812E-08 | 2.331E-07 | PDGF-R-beta, EGF, PDGF receptor, TGF-beta 1, TNF-alpha, Beta-catenin | 9.812E-08 | PDGF-R-beta, EGF, PDGF receptor, TGF-beta 1, TNF-alpha, Beta-catenin | 1.329E-07 | PDGF-R-beta, EGF, PDGF receptor, TNF-alpha, TGF-beta 1, Beta-catenin |
| Cell adhesion_Chemokines and adhesion | 2.906E-07 | 1.272E-05 | MMP-2, VEGFR-2, FAK1, CD44, Actin, Beta-catenin | 2.906E-07 | VEGF-A, MMP-2, VEGFR-2, FAK1, CD44, Actin, Beta-catenin | 7.390E-06 | VEGF-A, MMP-2, FAK1, CD44, Actin, Beta-catenin |
| Normal and pathological TGF-beta-mediated regulation of cell proliferation | 3.405E-07 | 2.490E-05 | PDGF-R-beta, PDGF receptor, TGF-beta 1, Beta-catenin | 3.405E-07 | PDGF-R-beta, PDGF receptor, TGF-beta 1, SMAD4, Beta-catenin | 1.726E-05 | PDGF-R-beta, PDGF receptor, TGF-beta 1, Beta-catenin |
| Development_TGF-beta-dependent induction of EMT via SMADs | 4.626E-07 | 3.162E-05 | TGF-beta, MMP-2, TGF-beta 3, TGF-beta 1 | 4.626E-07 | TGF-beta, MMP-2, TGF-beta 3, TGF-beta 1, | 2.193E-05 | TGF-beta, MMP-2, TGF-beta 3, TGF-beta 1 |

| | | | | | SMAD4 | | |
|--|-----------|-----------|--|-----------|---|-----------|--|
| Cytoskeleton remodeling_TGF, WNT and cytoskeletal remodeling | 5.944E-07 | 2.775E-04 | VEGFR-2, FAK1, TGF-beta 1, Actin, Beta-catenin | 5.944E-07 | VEGF-A, VEGFR-2, FAK1, WNT, TGF-beta 1, Actin, Beta-catenin | 1.350E-05 | VEGF-A, FAK1, WNT, TGF-beta 1, Actin, Beta-catenin |