

| Transcription factor | Effect on gene expression | Target gene | Reference |
|----------------------|---------------------------|---|----------------------|
| Msx2 | positive | <i>Ihh</i> <i>Alpl</i> <i>Col10a1</i> | [40] |
| Mef2c | positive | <i>Col10a1</i> | [69] |
| Hey1 | positive | <i>Col10a1</i> | [39] |
| Sox9 | positive negative | <i>Col10a1</i> <i>Spp1</i> <i>Mmp13</i> | [73] [38] |
| Egr1 | positive negative | <i>Hpse</i> <i>Spp1</i> <i>Acan</i> | [74] [75] [76] |
| Mafb | positive negative | <i>Mmp13</i> <i>Acan</i> | [77] |
| AP-1 complex | positive | <i>Mmp13</i> <i>Mmp12</i> <i>Spp1</i> | [78] [79] [80] |
| Rbpj | positive | <i>Mmp13</i> | [72] |
| Hmga1 | positive | <i>Igfbp3</i> | [81] |

Additional References

69. Arnold MA, Kim Y, Czubryt MP, Phan D, McAnally J, et al. (2007) MEF2C transcription factor controls chondrocyte hypertrophy and bone development. *Dev Cell* 12: 377–389. doi:10.1016/j.devcel.2007.02.004.
72. Kohn A, Dong Y, Mirando AJ, Jesse AM, Honjo T, et al. (2012) Cartilage-specific RBPj -dependent and -independent Notch signals regulate cartilage and bone development. *Development* 139: 1198–1212. doi:10.1242/dev.070649.
73. Dy P, Wang W, Bhattaram P, Wang Q, Wang L, et al. (2012) Sox9 Directs Hypertrophic Maturation and Blocks Osteoblast Differentiation of Growth Plate Chondrocytes. *Developmental Cell* 22: 597–609. doi:10.1016/j.devcel.2011.12.024.
74. de Mestre AM, Rao S, Hornby JR, Soe-Htwe T, Khachigian LM, et al. (2005) Early growth response gene 1 (EGR1) regulates heparanase gene transcription in tumor cells. *J Biol Chem* 280: 35136–35147. doi:10.1074/jbc.M503414200.
75. Liu Q-F, Yu H-W, Liu G-N (2009) Egr-1 upregulates OPN through direct binding to its promoter and OPN upregulates Egr-1 via the ERK pathway. *Mol Cell Biochem* 332: 77–84. doi:10.1007/s11010-009-0176-4.
76. Rockel JS, Bernier SM, Leask A (2009) Egr-1 inhibits the expression of extracellular matrix genes in chondrocytes by TNFalpha-induced MEK/ERK signalling. *Arthritis Res Ther* 11: R8. doi:10.1186/ar2595.
77. Zhang Y, Ross AC (2013) Retinoic acid and the transcription factor MafB act together and differentially to regulate aggrecan and matrix metalloproteinase gene expression in neonatal chondrocytes. *Journal of Cellular Biochemistry* 114: 471–479. doi:10.1002/jcb.24387.
78. Ahmad R, Sylvester J, Zafarullah M (2007) MyD88, IRAK1 and TRAF6 knockdown in human chondrocytes inhibits interleukin-1-induced matrix metalloproteinase-13 gene expression and promoter activity by impairing MAP kinase activation. *Cell Signal* 19: 2549–2557. doi:10.1016/j.cellsig.2007.08.013.

79. Wu L, Tanimoto A, Murata Y, Fan J, Sasaguri Y, et al. (2001) Induction of human matrix metalloproteinase-12 gene transcriptional activity by GM-CSF requires the AP-1 binding site in human U937 monocytic cells. *Biochem Biophys Res Commun* 285: 300–307.
doi:10.1006/bbrc.2001.5161.
80. Sharma P, Kumar S, Kundu GC (2010) Transcriptional regulation of human osteopontin promoter by histone deacetylase inhibitor, trichostatin A in cervical cancer cells. *Mol Cancer* 9: 178.
doi:10.1186/1476-4598-9-178.
81. Gasparini G, Gori MD, Paonessa F, Chiefari E, Brunetti A, et al. (2012) Functional relationship between high mobility group A1 (HMGA1) protein and insulin-like growth factor-binding protein 3 (IGFBP-3) in human chondrocytes. *Arthritis Res Ther* 14: R207. doi:10.1186/ar4045.