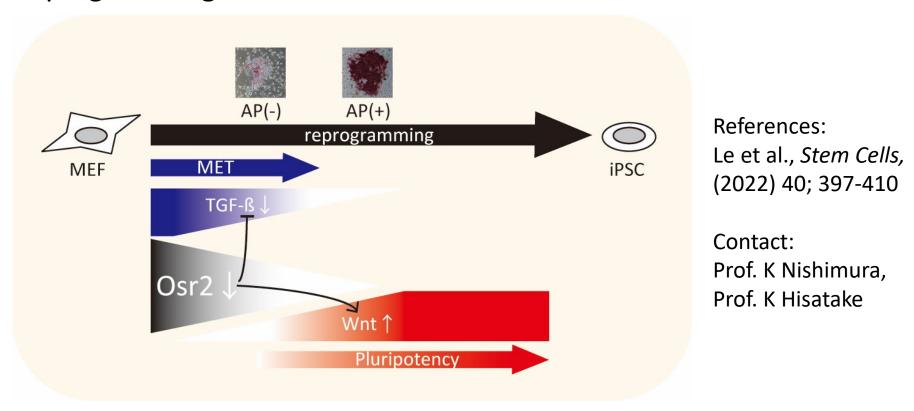
From Laboratory of Gene Regulation

Downregulation of Odd-Skipped Related 2, a Novel Regulator of Epithelial-Mesenchymal Transition, Enables Efficient Somatic Cell Reprogramming



We found that downregulation of Osr2 is crucial for efficient reprogramming of MEFs. Osr2 functions as an EMT regulator through activation of TGF- β signaling, which is inhibitory for progression of MET during reprogramming. Moreover, downregulation of Osr2 is required for activation of Wnt signaling, which promotes acquisition of pluripotency. These results show that Osr2 is one of key transcriptional regulators that are downregulated for efficient reprogramming by disintegrating the somatic cell identity.