

POU5F1 (OCT4), SOX2, NANOG, ZSCAN10, PRDM14, SMAD2, FOXP1-ES bind the POU5F1 (OCT4) promoter

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Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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Literature references

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Reactome database release: 75

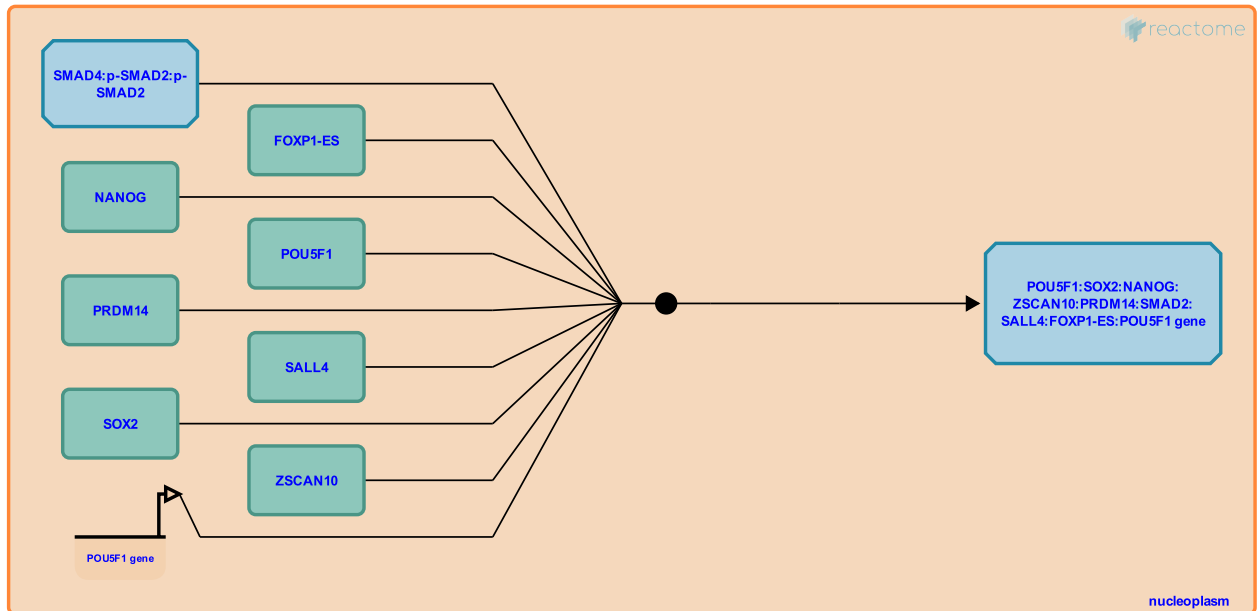
This document contains 1 reaction ([see Table of Contents](#))

POU5F1 (OCT4), SOX2, NANOG, ZSCAN10, PRDM14, SMAD2, FOXP1-ES bind the POU5F1 (OCT4) promoter ↗

Stable identifier: R-HSA-1112609

Type: binding

Compartments: nucleoplasm



POU5F1 (OCT4), SOX2, and NANOG bind distinct sites in the promoter of the POU5F1 gene (Boyer et al. 2005, Chew et al. 2005, Rodda et al. 2005, Jin et al. 2007, Lister et al. 2009, Jung et al. 2010, Goke et al. 2011). The set of target genes of POU5F1, SOX2, and NANOG includes POU5F1, SOX2, and NANOG themselves, thus their expression is a component of an autoregulatory loop. Activin/Nodal signaling also regulates POU5F1 transcription via SMAD2 and SMAD3 (Brown et al. 2011). PRDM14 binds the POU5F1 promoter and regulates transcription (Chia et al. 2010).

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Editions

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