

# KLF4 gene expression is stimulated by FOXO1,FOXO3

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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: 88

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

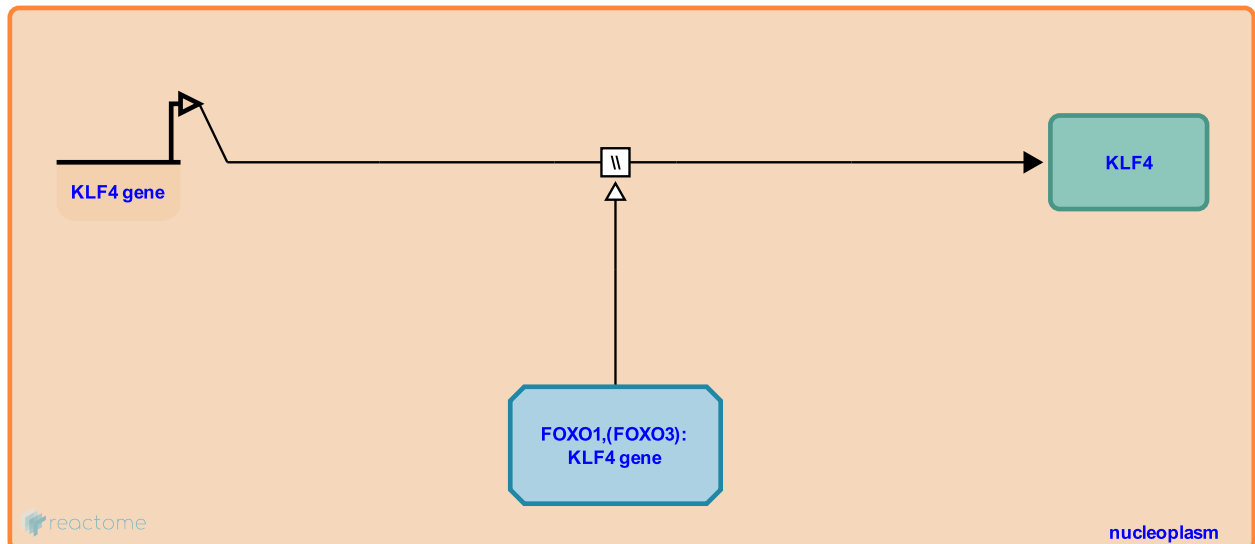
## KLF4 gene expression is stimulated by FOXO1,FOXO3 ↗

**Stable identifier:** R-HSA-9625409

**Type:** omitted

**Compartments:** nucleoplasm

**Inferred from:** [Klf4 gene expression is stimulated by FOXO1 \(Mus musculus\)](#)



Based on studies in mice, FOXO1 and possibly FOXO3 directly stimulate transcription of the KLF4 gene, encoding a transcription factor Krueppel-like factor 4. KLF4 inhibits proliferation of mouse B cells (Yusuf et al. 2008). KLF4 has been reported to transcriptionally repress FOXO1 gene (Tang et al. 2016). In hypothalamic orexigenic neurons, KLF4 positively regulates expression of AGRP (agouti-related protein), an established FOXO target (Imbernon et al. 2014).

### Editions

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