

RUNX1 and ELF1 bind the IL3 gene 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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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
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Reactome database release: 74

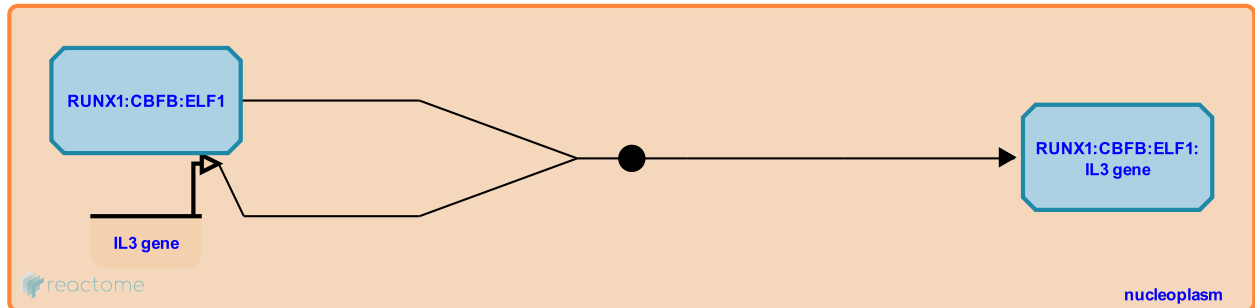
This document contains 1 reaction ([see Table of Contents](#))

RUNX1 and ELF1 bind the IL3 gene promoter ↗

Stable identifier: R-HSA-8938938

Type: binding

Compartments: nucleoplasm



RUNX1 (AML1) and ELF1 (MEF) bind to adjacent RUNX1- and ETS- response elements in the promoter of the IL3 gene, encoding interleukin-3. While RUNX1 and ELF1 can independently activate the IL3 gene transcription, formation of the complex between RUNX1 and ELF1 has a synergistic effect on IL3 expression (Mao et al. 1999).

Literature references

Mao, S., Frank, RC., Zhang, J., Miyazaki, Y., Nimer, SD. (1999). Functional and physical interactions between AML1 proteins and an ETS protein, MEF: implications for the pathogenesis of t(8;21)-positive leukemias. *Mol. Cell. Biol.*, 19, 3635-44. ↗

Editions

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