

RUNX1 and ELF1, ELF2 or PAX5 bind the BLK 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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

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Reactome database release: 70

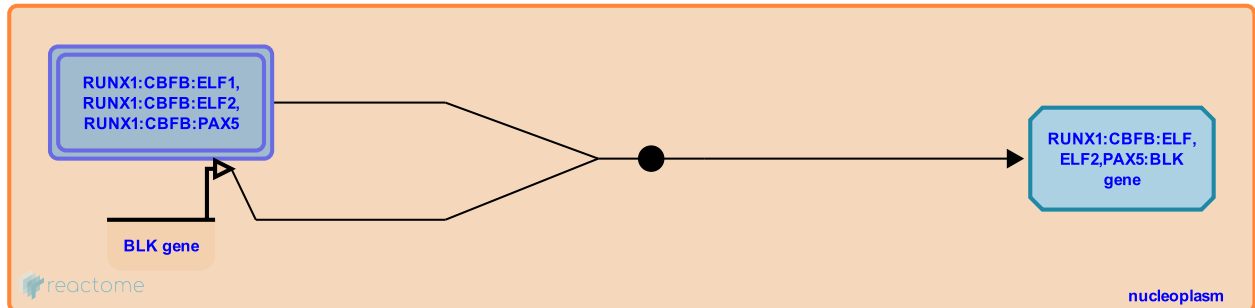
This document contains 1 reaction ([see Table of Contents](#))

RUNX1 and ELF1, ELF2 or PAX5 bind the BLK gene promoter ↗

Stable identifier: R-HSA-8938965

Type: binding

Compartments: nucleoplasm



The RUNX1 response element in the promoter of the BLK gene, encoding B cell tyrosine kinase BLK, is adjacent to the ETS response element as well as the PAX5 (BSAP) response element. The RUNX1:CBFB complex can bind to the ETS family transcription factors ELF1 or ELF2, and this complex can bind to RUNX1 and ETS response elements in the BLK promoter (Cho et al. 2004). RUNX1 can also form a complex with PAX5 (BSAP), and this complex can bind to RUNX1 and PAX5 response elements in the BLK promoter (Libermann et al. 1999). It is not known whether a larger complex, consisting of ELF1 or ELF2, the RUNX1:CBFB complex and PAX5 is formed and if ELF1/ELF2, RUNX1 and PAX5 can simultaneously reside at the BLK promoter. PAX5 is known to contain an ETS binding region and it is possible that it can, through this region, interact with ELF1 and ELF2 (Cho et al. 2004).

Literature references

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Editions

2016-09-14	Authored	Orlic-Milacic, M.
2016-12-20	Reviewed	Ito, Y., Chuang, LS.
2017-05-09	Edited	Orlic-Milacic, M.