

ITGAL gene,(ITGA4 gene) expression is stimulated by RUNX3:CBFB

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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

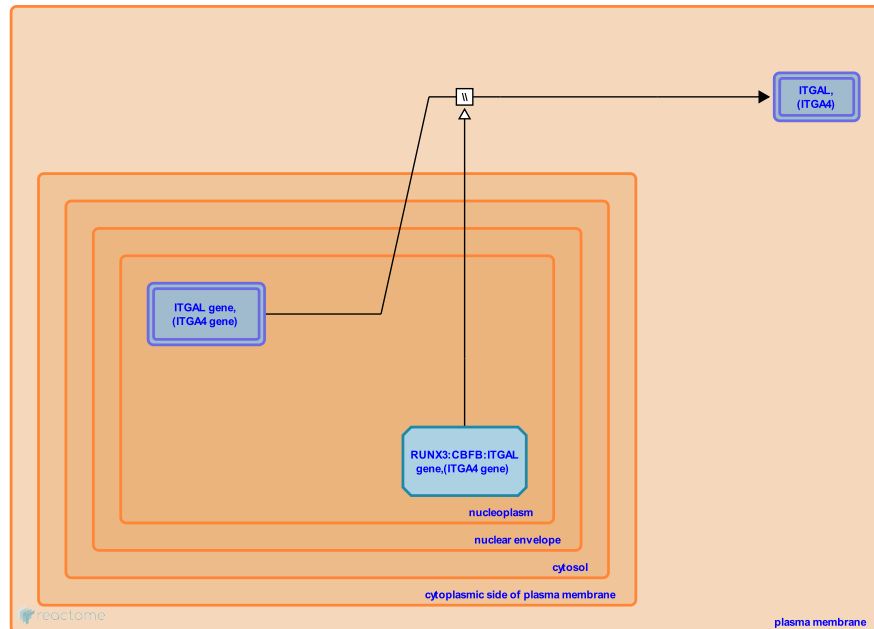
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ITGAL gene,(ITGA4 gene) expression is stimulated by RUNX3:CBFB ↗

Stable identifier: R-HSA-8949343

Type: omitted

Compartments: nucleoplasm, plasma membrane



Transcription of the ITGAL (CD11a) gene, is stimulated by binding of RUNX3, presumably in complex with CBFB, to the ITGAL promoter. ITGAL is a leukocyte integrin involved in transendothelial migration of leukocytes during immune and inflammatory responses as well as co-stimulation of T cells. RUNX3, as well as RUNX1, positively regulate integrin alpha 4 (ITGA4, also known as CD49d) expression. A RUNX binding site exists in the ITGA4 promoter, but the direct regulation by RUNX transcription factors has not been demonstrated (Domínguez-Soto et al. 2005).

Literature references

Corbí, AL., Ruiz, N., Erickson, P., Andreu, EJ., Sanchez-Elsner, T., Puig-Kröger, A. et al. (2003). RUNX/AML and C/EBP factors regulate CD11a integrin expression in myeloid cells through overlapping regulatory elements. *Blood*, 102, 3252-61. ↗

Corbí, AL., Puig-Kröger, A., Relloso, M., Vega, MA., Domínguez-Soto, A. (2005). RUNX3 regulates the activity of the CD11a and CD49d integrin gene promoters. *Immunobiology*, 210, 133-9. ↗

Editions

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