

EBI3 gene transcription and translation

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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

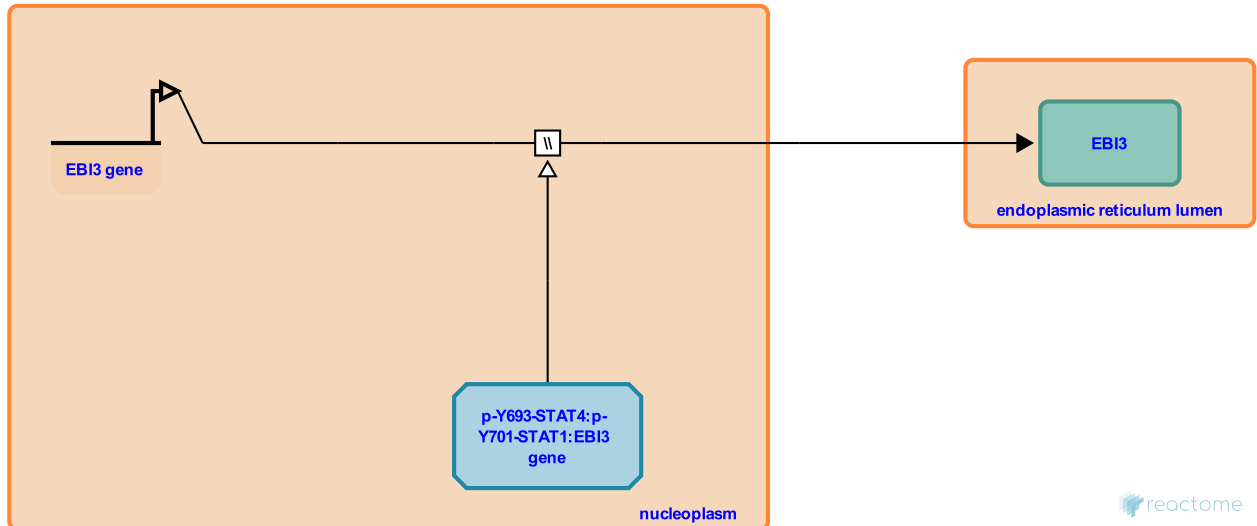
This document contains 1 reaction ([see Table of Contents](#))

EBI3 gene transcription and translation [↗](#)

Stable identifier: R-HSA-8984963

Type: omitted

Compartments: nucleoplasm, endoplasmic reticulum lumen



Interleukin-35 (IL35) is a complex conformed by Interleukin-12 subunit alpha (IL12A) and Interleukin-27 subunit alpha (IL27). IL35 can induce heterodimers of Interleukin-6 receptor beta precursor (IL6ST) and Interleukin-12 receptor beta 2 (IL12RB2). Consequently, heteromeric Signal transducer and activator of transcription 1-alpha/beta (STAT1) and Signal transducer and activator of transcription 4 (STAT4) are phosphorylated. Subsequently, this STAT1:STAT4 complex can translocate into the nucleus and bind to promoter regions of IL27 thereby facilitating the protein expression. Thus, by inducing the expression of itself, a positive feedback regulation is achieved in the IL35 signalling pathway. This is a black box event because the intermediate steps of IL27 transcription/translation are omitted.

Literature references

Delgoffe, GM., Murray, PJ., Drake, CG., Satoskar, AR., Fairweather, D., Guy, CS. et al. (2012). The composition and signaling of the IL-35 receptor are unconventional. *Nat. Immunol.*, 13, 290-9. [↗](#)

Editions

| | | |
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