

DDX41 ubiquitination by TRIM21

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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

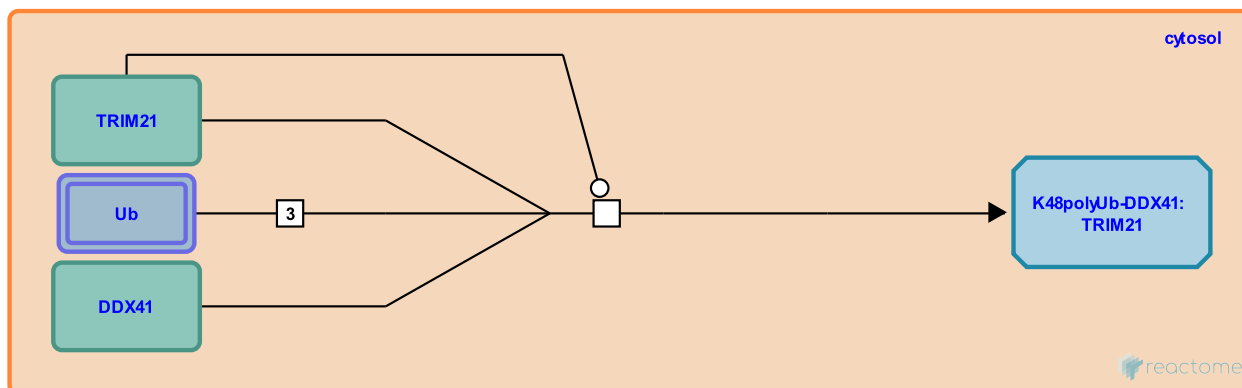
This document contains 1 reaction ([see Table of Contents](#))

DDX41 ubiquitination by TRIM21 [↗](#)

Stable identifier: R-HSA-3134946

Type: transition

Compartments: cytosol



TRIM21 (Ro52/SSA1) is a member of the TRIM (Tripartite Motif) family of E3 ligases. E3 activity of TRIM21 was found to be a RING domain-dependent and required E2-conjugating enzymes UBE2D1/2/3/4 and UBE2E1/2 (Espinosa A et al. 2011).

TRIM21 can form a complex with DDX41 leading to the K48-linked ubiquitination and degradation of DDX41 (Zhang Z et al. 2013).

Literature references

Yuan, B., Weng, L., Lu, N., Zhang, Z., Liu, YJ., Bao, M. (2012). The E3 ubiquitin ligase TRIM21 negatively regulates the innate immune response to intracellular double-stranded DNA. *Nat. Immunol.* [↗](#)

Arrowsmith, CH., Sunnerhagen, M., Wahren-Herlenius, M., Sheng, Y., Ambrosi, A., Abelius, MS. et al. (2011). Anti-Ro52 autoantibodies from patients with Sjögren's syndrome inhibit the Ro52 E3 ligase activity by blocking the E3/E2 interface. *J. Biol. Chem.*, 286, 36478-91. [↗](#)

Editions

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