

USP28 deubiquitinates CLSPN and MYC

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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: 74

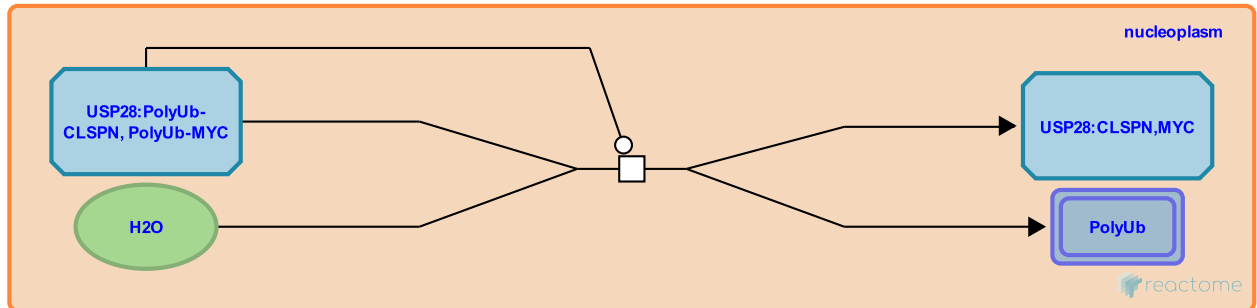
This document contains 1 reaction ([see Table of Contents](#))

USP28 deubiquitinates CLSPN and MYC [↗](#)

Stable identifier: R-HSA-5696914

Type: transition

Compartments: nucleoplasm



USP28 is involved in DNA damage induced apoptosis by specifically stabilizing and deubiquitinating proteins of the DNA damage pathway including CLSPN (Zhang et al. 2006). It also binds to the nucleoplasmic alpha isoform of Fbw7, counteracting FBW7 ubiquitin ligase activity by deubiquitinating MYC in the nucleoplasm, which reduces MYC proteasomal degradation (Popov et al. 2007).

Literature references

Zhang, D., Zaugg, K., Mak, TW., Elledge, SJ. (2006). A role for the deubiquitinating enzyme USP28 in control of the DNA-damage response. *Cell*, 126, 529-42. [↗](#)

Popov, N., Herold, S., Llamazares, M., Schüle, C., Eilers, M. (2007). Fbw7 and Usp28 regulate myc protein stability in response to DNA damage. *Cell Cycle*, 6, 2327-31. [↗](#)

Editions

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