

# SUMOylation of NPM1 with SUMO1

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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

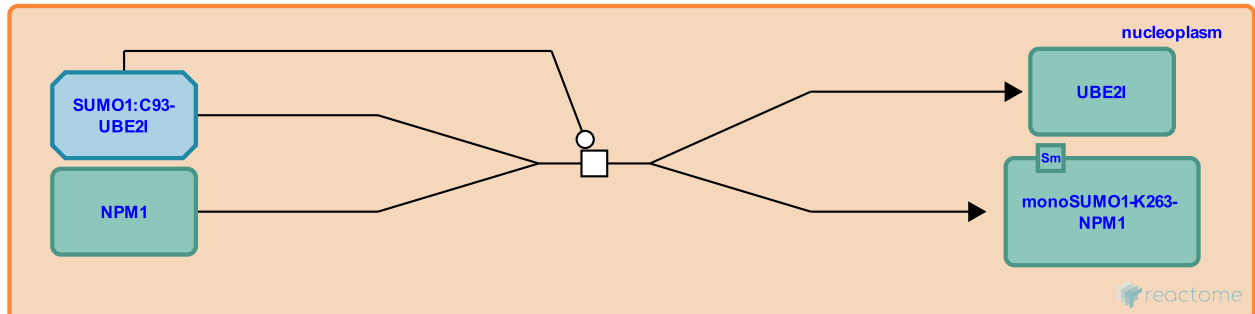
This document contains 1 reaction ([see Table of Contents](#))

## SUMOylation of NPM1 with SUMO1 [↗](#)

**Stable identifier:** R-HSA-4086088

**Type:** transition

**Compartments:** nucleoplasm



NPM1 (Nucleophosmin, B23) is SUMOylated at lysine-263 with SUMO1 (Liu et al. 2007). SUMOylation enhances binding of NPM1 to Rb and enhances nuclear residency of NPM1.

### Literature references

Liu, X., Shinmura, K., Kang, S., Ma, Z., Jang, SW., Ye, K. et al. (2007). Sumoylation of nucleophosmin/B23 regulates its subcellular localization, mediating cell proliferation and survival. *Proc. Natl. Acad. Sci. U.S.A.*, 104, 9679-84. [↗](#)

### Editions

2013-08-05	Authored, Edited	May, B.
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