

MAPK6 is degraded by the 26S proteasome

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06/05/2024

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.

The development of Reactome is supported by grants from the US National Institutes of Health (P41 HG003751), University of Toronto (CFREF Medicine by Design), European Union (EU STRP, EMI-CD), and the European Molecular Biology Laboratory (EBI Industry program).

Literature references

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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
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- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

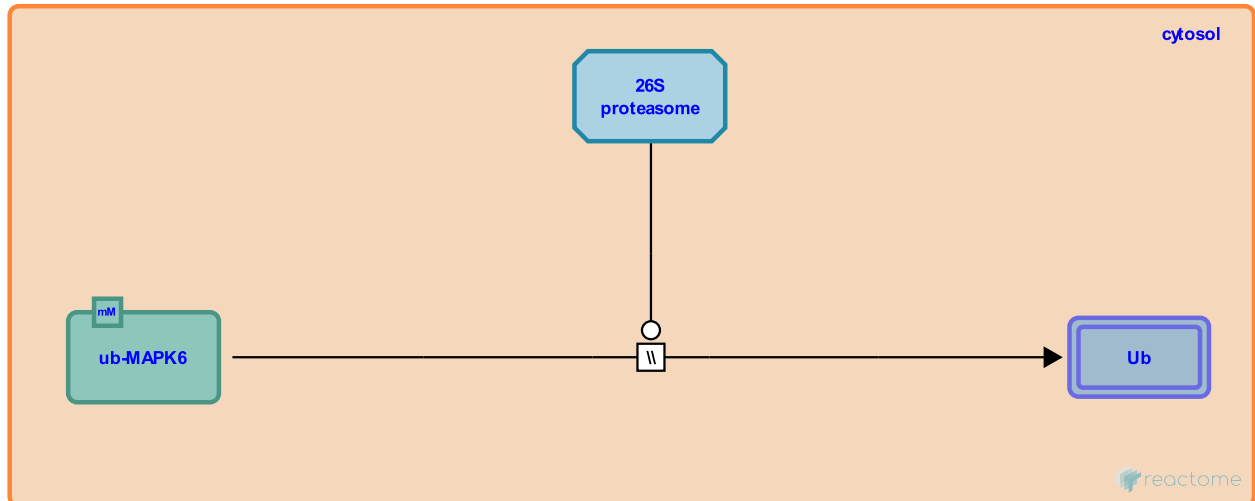
This document contains 1 reaction ([see Table of Contents](#))

MAPK6 is degraded by the 26S proteasome [↗](#)

Stable identifier: R-HSA-5687112

Type: omitted

Compartments: cytosol



MAPK6 is a short-lived protein with a half-life of 30 minutes in proliferating cells. Turnover is promoted by the conjugation of ubiquitin to the free amino terminal by an unknown ligase and subsequent degradation by the 26 S proteasome (Coulombe et al, 2003; Coulombe et al, 2004). Ubiquitination and degradation of MAPK6 may also occur in the nucleus as well as the cytosol.

Literature references

Meloche, S., Rodier, G., Coulombe, P., Bonneil, E., Thibault, P. (2004). N-Terminal ubiquitination of extracellular signal-regulated kinase 3 and p21 directs their degradation by the proteasome. *Mol. Cell. Biol.*, 24, 6140-50. [↗](#)

Meloche, S., Rodier, G., Coulombe, P., Pelletier, S., Pellerin, J. (2003). Rapid turnover of extracellular signal-regulated kinase 3 by the ubiquitin-proteasome pathway defines a novel paradigm of mitogen-activated protein kinase regulation during cellular differentiation. *Mol. Cell. Biol.*, 23, 4542-58. [↗](#)

Editions

2015-04-06	Authored	Rothfels, K.
2015-04-24	Reviewed	Moens, U.
2015-05-05	Reviewed	Seternes, OM.
2015-05-12	Reviewed	Meloche, S., Soulez, M., Mathien, S.
2015-05-13	Edited	Rothfels, K.