

TTLL3, TTLL8, TTLL10 polyglycylate tubulin

D'Eustachio, P., Jassal, B., Jupe, S.

European Bioinformatics Institute, New York University Langone Medical Center, Ontario Institute for Cancer Research, Oregon Health and Science University.

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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

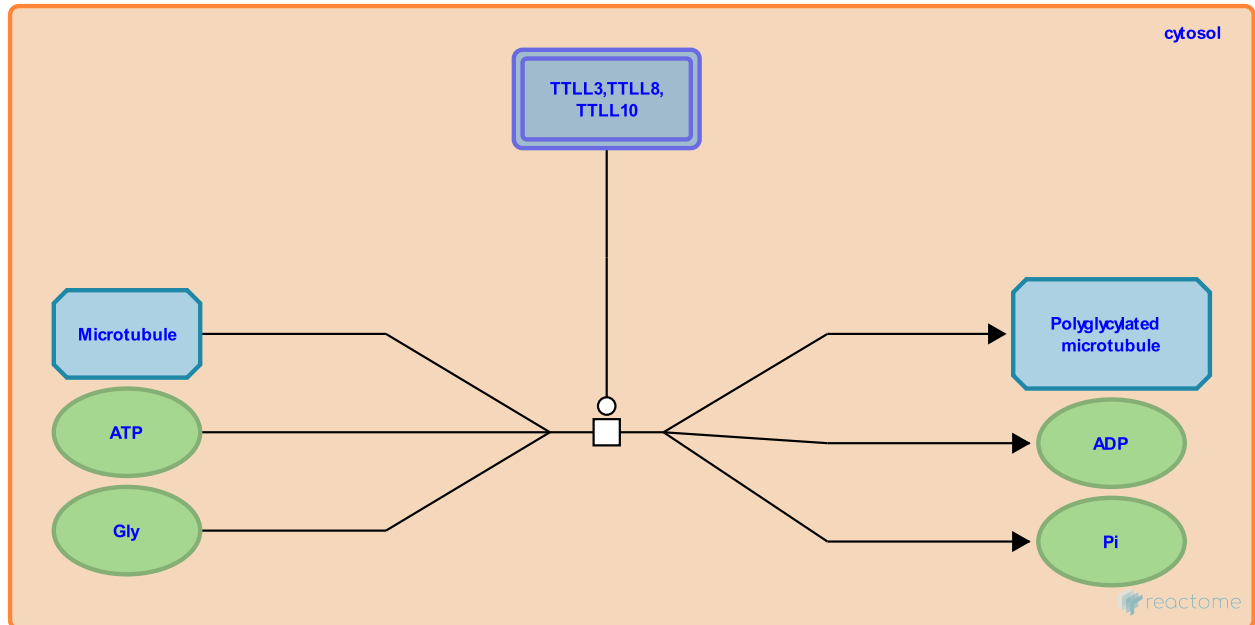
This document contains 1 reaction ([see Table of Contents](#))

TTLL3, TTLL8, TTLL10 polyglycylate tubulin [↗](#)

Stable identifier: R-HSA-8867370

Type: transition

Compartments: cytosol



Tubulin is modified by glutamylation and glycylation, the addition of peptide branches made of glutamyl or glycyll residues respectively, which are attached to the gamma-carboxyl group of glutamic acids within the C-terminal tail domains of alpha- and beta-tubulin. They are added by members of the tubulin tyrosine ligase (TTL family). TTLL3, 8, and 10 are glycyllases (Ikegami et al. 2008, Ikegami and Setou, 2009; Rogowski et al. 2009; Wloga et al. 2009) with TTLL3 and 8 serving as initiases, and TTLL10 serving as an elongase. In this event polyglycylation is arbitrarily shown on only one tubulin protofilament within the microtubule.

Literature references

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Editions

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