

TTCP hydrolyzes the terminal L-Tyr residue from alpha-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

Fabregat, A., Fabregat, A., Fabregat, A., Fabregat, A., Fabregat, A., Fabregat, A. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)

Sidiropoulos, K., Sidiropoulos, K., Sidiropoulos, K., Sidiropoulos, K., Sidiropoulos, K., Sidiropoulos, K. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)

Fabregat, A., Fabregat, A., Fabregat, A., Fabregat, A., Fabregat, A., Fabregat, A. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)

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Reactome database release: 92

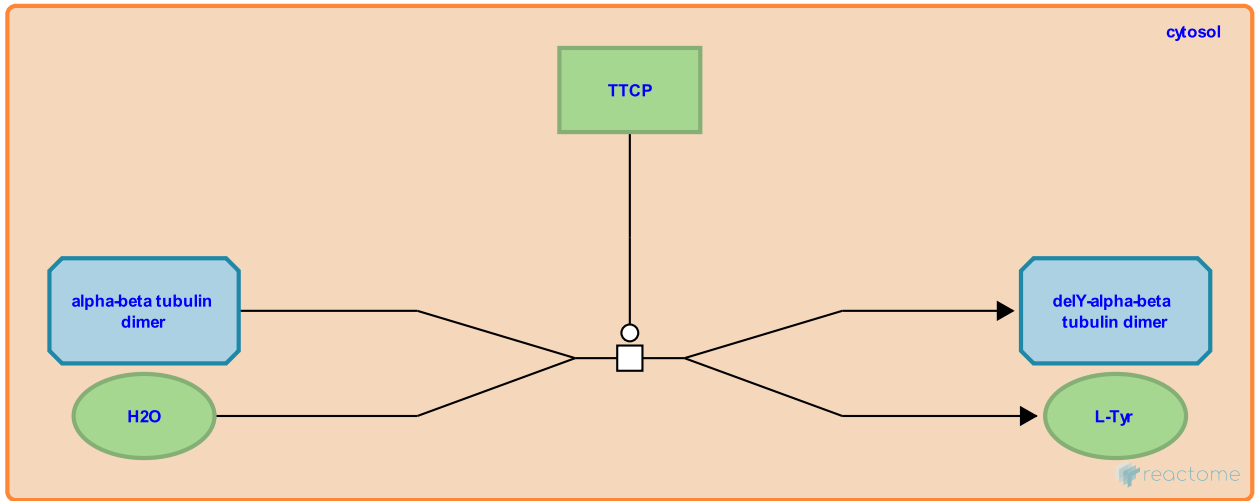
This document contains 1 reaction ([see Table of Contents](#))

TTCP hydrolyzes the terminal L-Tyr residue from alpha-tubulin ↗

Stable identifier: R-NUL-8955728

Type: transition

Compartments: cytosol



TTCP (tubuliny-tyrosine carboxypeptidase) hydrolyzes the terminal L-Tyr residue from the alpha-tubulin subunit of an alpha tubulin:beta tubulin dimer to yield delY-alpha tubulin and L-tyrosine (L-Tyr). Although TTCP enzyme has not been purified from any species, studies of material partially purified from chicken brain have allowed its activity to be defined and distinguished from those of widely expressed carboxypeptidases with broader substrate specificities (Argarana et al. 1980). These studies were carried out with microtubulues and alpha-beta tubulin dimers from brain; here a bovine alpha-beta tubulin dimer (TUBA1B:TUBB4A) has been annotated as the substrate although all alpha-tubulins with a carboxyterminal tyrosine residue are thought to serve as substrates.

Literature references

Caputto, R., Barra, HS., Argarana, CE. (1980). Tubuliny-tyrosine carboxypeptidase from chicken brain: properties and partial purification. *J. Neurochem.*, 34, 114-8. ↗

Editions

2017-01-13	Authored	D'Eustachio, P.
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