

Collagen type VI degradation by MMP2,9,11

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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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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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Reactome database release: 89

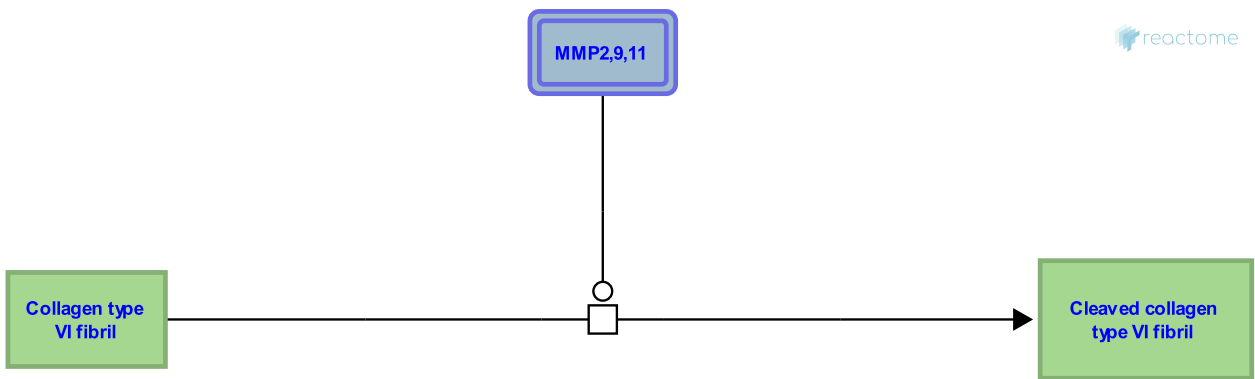
This document contains 1 reaction ([see Table of Contents](#))

Collagen type VI degradation by MMP2,9,11 [↗](#)

Stable identifier: R-HSA-1564112

Type: transition

Compartments: extracellular region



Type VI collagen aggregates into distinctive microfibrils known as beaded filaments that form an independent microfibrillar network in virtually all connective tissues except for bone (von der Mark et al. 1984). It plays a role in the maintenance of tissue integrity since it participates in both cell-matrix and matrix-matrix interactions, interacting with many other ECM proteins including fibronectin (Chang et al. 1997), type IV collagen (Kuo et al. 1997), type II collagen, decorin and biglycan (Bidanset et al. 1992). Collagen type VI has been described as a connecting protein (Gelse et al. 2003).

Collagen type VI is resistant to digestion by many MMPs but is cleaved by MMP2 (Myint et al. 1996, Veidal et al. 2011), MMP9 (Veidal et al. 2011) and MMP11 (Motrescu et al. 2008).

Literature references

Stoll, I., Etique, N., Motrescu, ER., Tomasetto, C., Blaise, S., Chenard, MP. et al. (2008). Matrix metalloproteinase-11/stromelysin-3 exhibits collagenolytic function against collagen VI under normal and malignant conditions. *Oncogene*, 27, 6347-55. [↗](#)

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Editions

2011-07-12	Authored	Jupe, S.
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