

TUSC3 transports Mg^{2+} from extracellular region to cytosol

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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

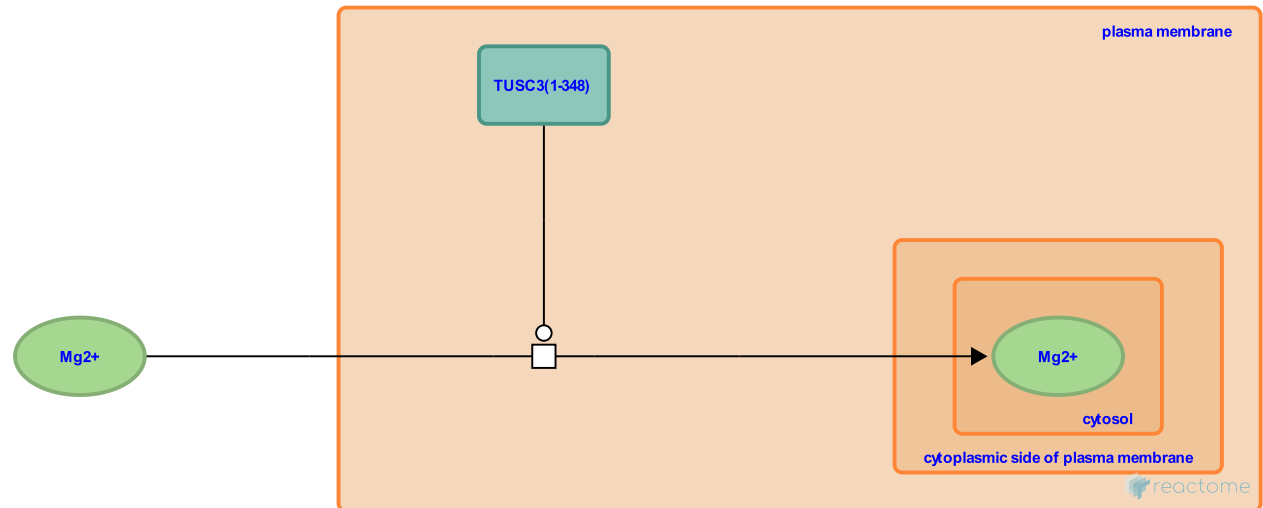
This document contains 1 reaction ([see Table of Contents](#))

TUSC3 transports Mg²⁺ from extracellular region to cytosol [↗](#)

Stable identifier: R-HSA-5339528

Type: transition

Compartments: cytosol, extracellular region, plasma membrane



Magnesium (Mg²⁺) is required for the catalytic activity of numerous metalloenzymes within a variety of subcellular organelles. Tumor suppressor candidate 3 (TUSC3) is expressed in most non-lymphoid cells and tissues and is an essential protein in Mg²⁺ uptake into cells (Zhou & Clapham 2009).

Literature references

Zhou, H., Clapham, DE. (2009). Mammalian MagT1 and TUSC3 are required for cellular magnesium uptake and vertebrate embryonic development. *Proc. Natl. Acad. Sci. U.S.A.*, 106, 15750-5. [↗](#)

Editions

2014-03-04	Authored, Edited	Jassal, B.
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