

SFTPD 12mer translocates from ER membrane to extracellular region

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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., Sidiropoulos, K., Viteri, G., Forner, O., Marin-Garcia, P., Arnau, V. et al. (2017). Reactome pathway analysis: a high-performance in-memory approach. *BMC bioinformatics*, 18, 142. [↗](#)
- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
- Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
- 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

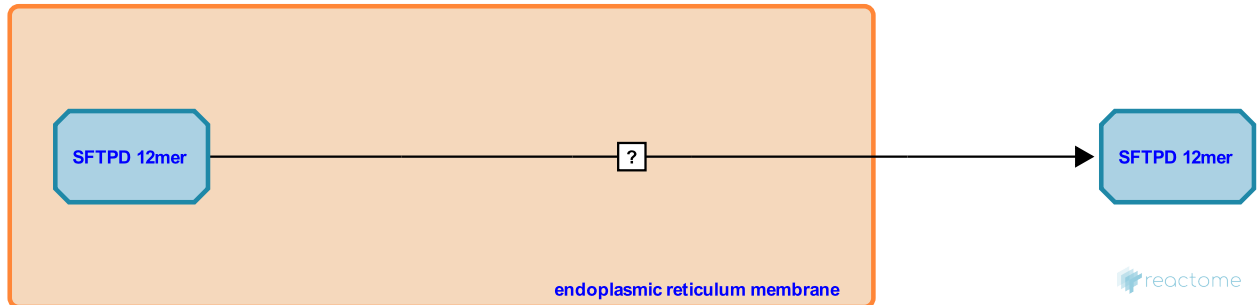
This document contains 1 reaction ([see Table of Contents](#))

SFTPD 12mer translocates from ER membrane to extracellular region [↗](#)

Stable identifier: R-HSA-9624778

Type: uncertain

Compartments: endoplasmic reticulum membrane, extracellular region



The pulmonary collectins, surfactant proteins A1, A2, A3 and D (SFTPAs, SFTPD 12mer), play important roles in innate host defense by binding and clearing invading microbes from the lung. They also influence surfactant homeostasis, contributing to the physical structures of lipids in the alveoli and to the regulation of surfactant function and metabolism. They are directly secreted from alveolar type II cells into the airway to function as part of the surfactant. The mechanism of secretion is unknown (Andreeva et al. 2007).

Literature references

Voyno-Yasenetskaya, TA., Kutuzov, MA., Andreeva, AV. (2007). Regulation of surfactant secretion in alveolar type II cells. *Am. J. Physiol. Lung Cell Mol. Physiol.*, 293, L259-71. [↗](#)

Editions

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