

SFTPs translocate from extracellular region to clathrin-coated vesicle

D'Eustachio, P., Jassal, B.

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

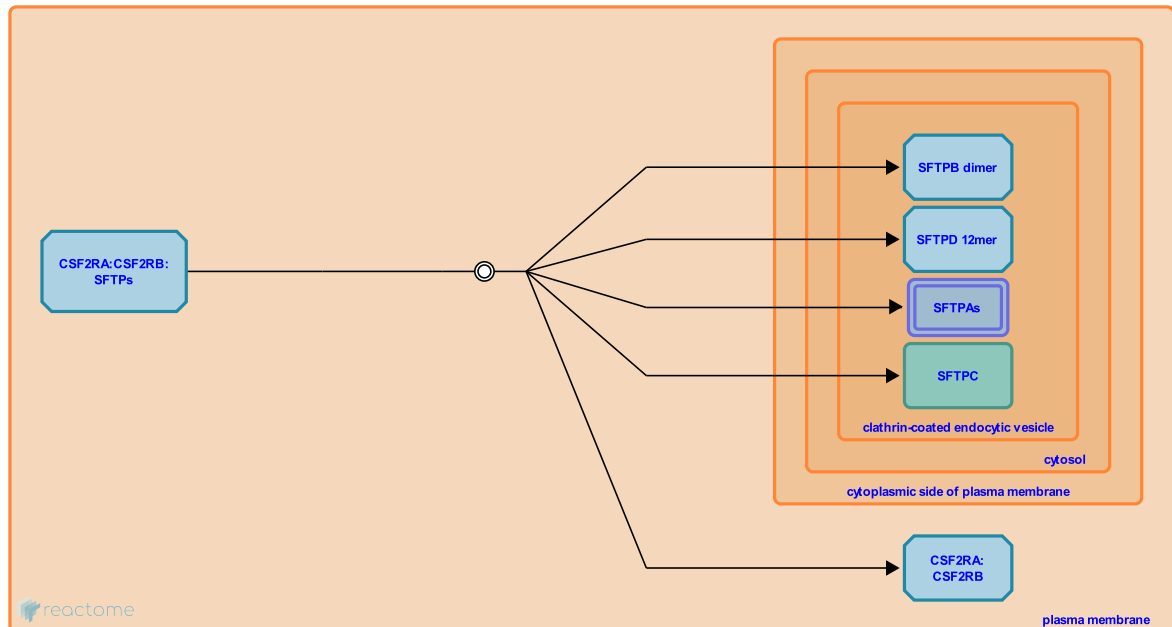
This document contains 1 reaction ([see Table of Contents](#))

SFTPs translocate from extracellular region to clathrin-coated vesicle ↗

Stable identifier: R-HSA-5686359

Type: dissociation

Compartments: plasma membrane, extracellular region, clathrin-coated endocytic vesicle



Surfactant catabolism by alveolar macrophages plays a small but critical part in surfactant recycling and metabolism. Upon ligand binding, granulocyte-macrophage colony-stimulating factor receptor (GM-CSF), a heterodimer of alpha (CSF2RA) and beta (CSF2RB) subunits (Hansen et al. 2008), initiates a signalling process that not only induces proliferation, differentiation and functional activation of hematopoietic cells but can also determine surfactant uptake into alveolar macrophages and its degradation via clathrin-coated vesicles. The exact mechanism of surfactant degradation in macrophages is poorly understood (Jain et al. 2005, Ikegami 2006). GM-CSF-deficiency can result in pulmonary alveolar proteinosis (PAP), a lung disease characterised by surfactant accumulation and lipid-engorged alveolar macrophages (Carey & Trapnell 2010).

Literature references

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Editions

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Jassal, B.

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D'Eustachio, P.