

HSPA8-mediated ATP hydrolysis promotes vesicle uncoating

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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: 70

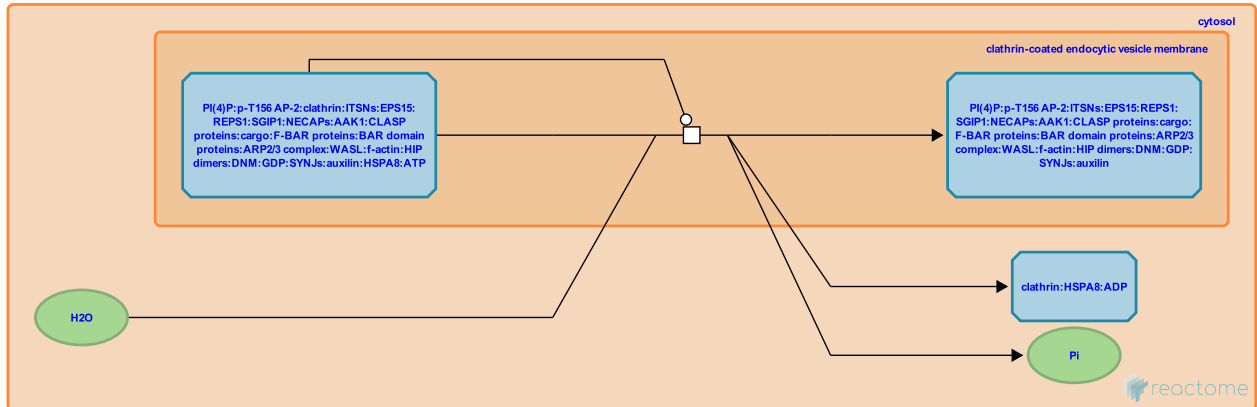
This document contains 1 reaction ([see Table of Contents](#))

HSPA8-mediated ATP hydrolysis promotes vesicle uncoating ↗

Stable identifier: R-HSA-8868658

Type: transition

Compartments: clathrin-coated endocytic vesicle membrane



HSPA8 hydrolyzes ATP to promote dissociation of the clathrin coat from the vesicle (reviewed in Sousa and Lafer, 2015). Interaction of HSPA8 with the C-terminal tail of clathrin may sterically block re-stabilization of the clathrin coat, which is thought to undergo transient cycles of 'breathing', or loosening of the interactions between the triskelions (Barouch et al, 1997; Rapoport et al, 2008; Xing et al, 2010). Alternatively, HSPA8 may destabilize the clathrin coat through intermolecular collisions with the coat (reviewed in Sousa and Lafer, 2015). The HSPA8-clathrin interaction persists once clathrin has been removed from the vesicle. This is thought to preclude aberrant repolymerization of clathrin by sequestering free clathrin (Schlossman et al, 1984; reviewed in Sousa and Lafer, 2015).

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Editions

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