

Insertion of gp41 fusion peptide into the target membrane

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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](#))

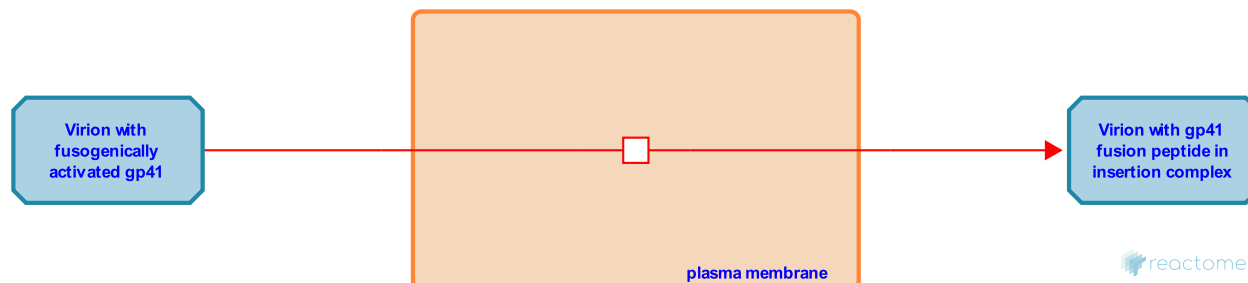
Insertion of gp41 fusion peptide into the target membrane [↗](#)

Stable identifier: R-HSA-164521

Type: transition

Compartments: plasma membrane

Diseases: Human immunodeficiency virus infectious disease



Insertion of the N-terminal fusion peptide of the HIV gp41 protein is the first step in the fusion of viral and target cell membranes. Substitutions of polar amino acids at residues 2, 9, 15 and 26 of the N terminus of this peptide completely eliminated its ability to cause fusion, implicating these residues in gp41's role in insertion and fusion. Studies have also shown that mutations in a stretch of residues from 36-64 (568 to 596 of ENV protein) caused gp41 to become partially or completely defective in mediating membrane fusion, suggesting that conformation of the peptide is important for proper insertion and fusion to occur.

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Editions

2006-02-17	Edited	Gopinathrao, G.
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