Translocation of Influenza A virus non-structural protein 1 (NS1A) into the nucleus

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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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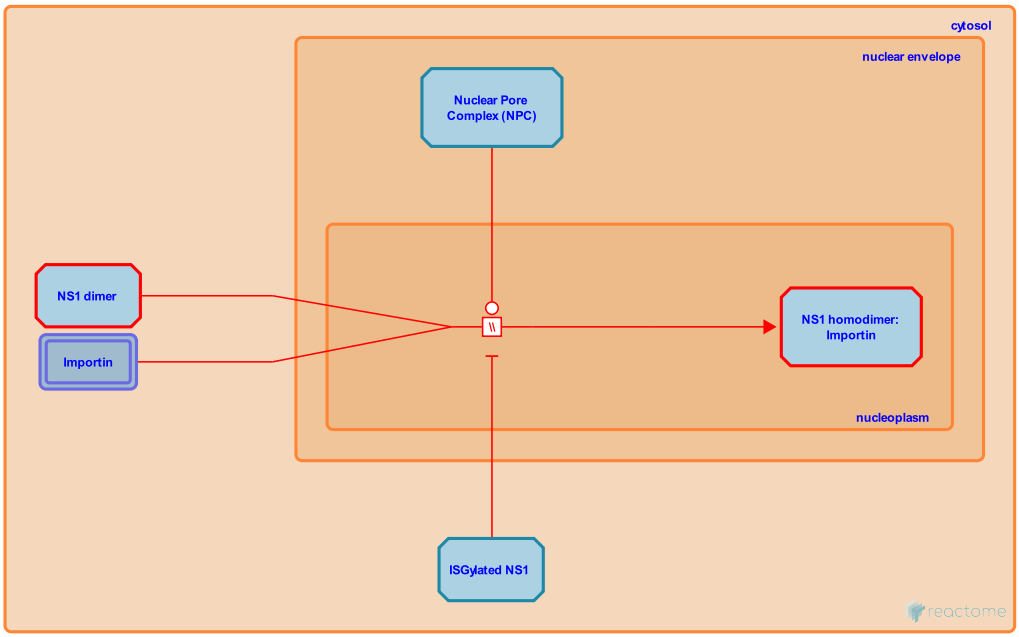
Stable identifier: R-HSA-1176059

Type: omitted

Compartments: nucleoplasm, cytosol

Diseases: influenza



Influenza A virus nonstructural protein 1 (NS1A) is a multifunctional protein that exists as a dimer and is involved in the inhibition of host cell antiviral pre-mRNA processing and counteracts host cell antiviral responses. Unlike most other RNA viruses, influenza viruses replicate in the nucleus of the host cells. NS1A protein carries two nuclear localization signal (NLS) elements and these sequence elements are recognized by importin-alpha/beta. In the cytoplasm NS1A binds to importin-alpha/beta and these protein complexes are then translocated into the nucleus through the nuclear pore complex (NPC). Note:Reactions directly involving interactions of human host proteins with foreign ones are highlighted in red.

Literature references

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Editions

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