

Docking and transport of the RNP:Karyopherin complex through the nuclear pore

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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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- 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](#))

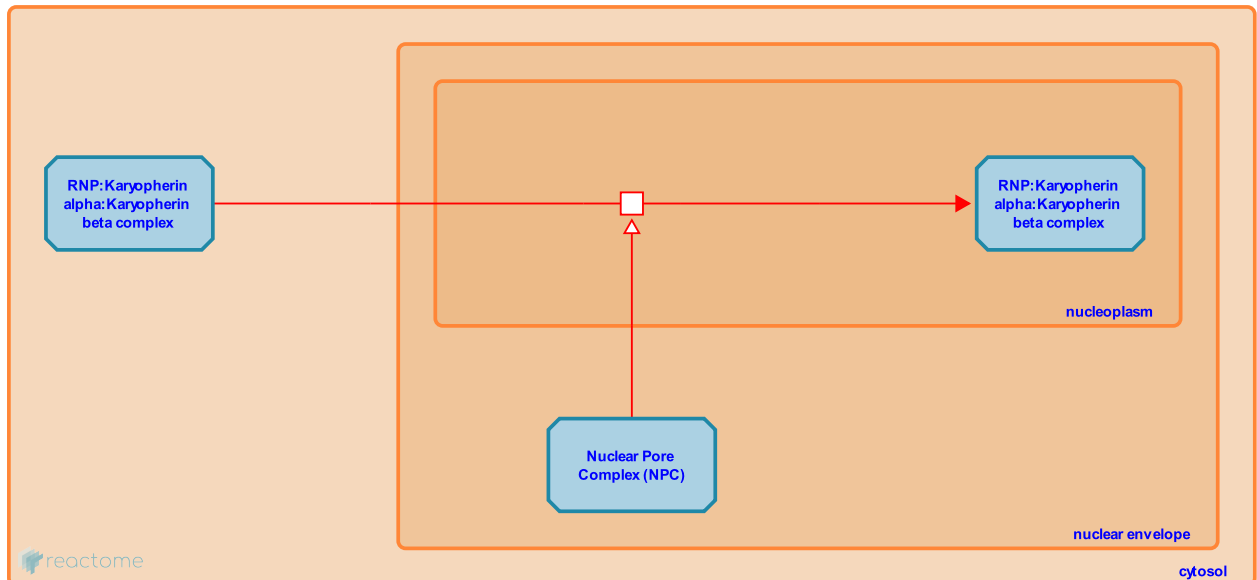
Docking and transport of the RNP:Karyopherin complex through the nuclear pore [↗](#)

Stable identifier: R-HSA-168337

Type: transition

Compartments: cytosol, nucleoplasm

Diseases: influenza



These RNPs (10-20nm wide) are too large to passively diffuse into the nucleus and therefore, once released from an incoming particle they must rely on the active import mechanism of the host cell nuclear pore complex (NPC). Once the RNP heterodimeric karyopherin complex docks at the NPC, it is transported into the nucleus.

Literature references

Nayak, DP., Mukaigawa, J. (1991). Two signals mediate nuclear localization of influenza virus (A/WSN/33) polymerase basic protein 2. *J Virol*, 65, 245-53. [↗](#)

Editions

2005-11-14	Authored	Gillespie, ME.
2006-10-29	Reviewed	Squires, B.