

# Importin-8 imports AGO2:miRNA 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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Reactome database release: 88

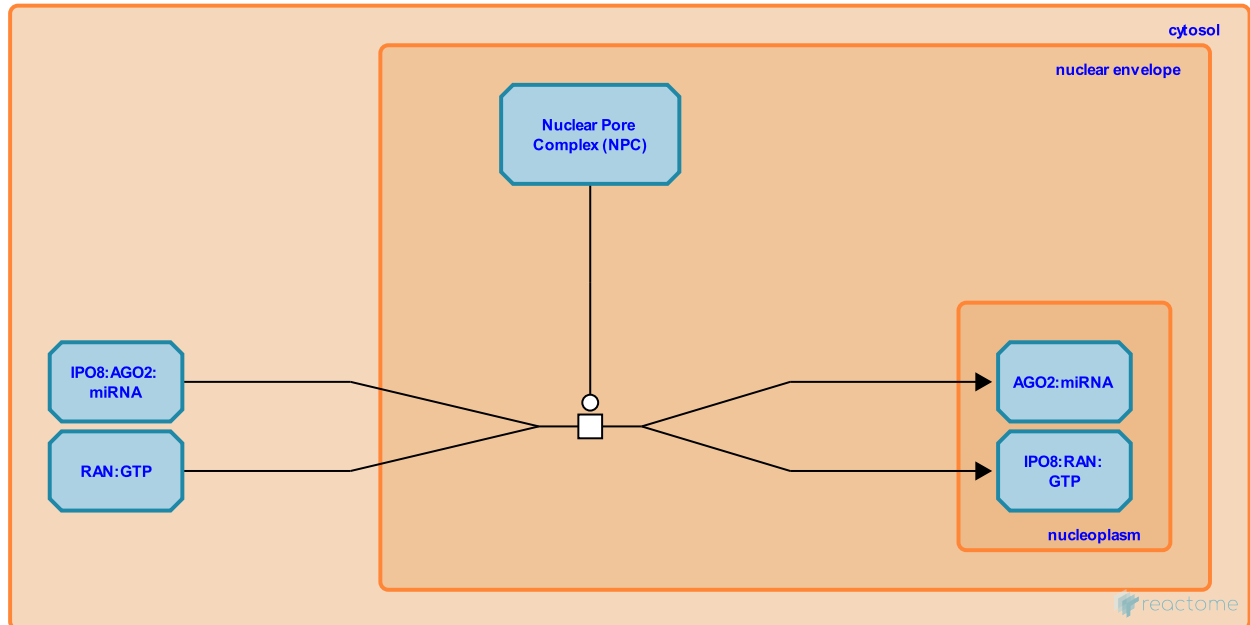
This document contains 1 reaction ([see Table of Contents](#))

## Importin-8 imports AGO2:miRNA into the nucleus ↗

**Stable identifier:** R-HSA-5578744

**Type:** transition

**Compartments:** cytosol, nucleoplasm, nuclear envelope



The AGO2:miRNA complex is formed in the cytosol (Ohrt et al 2008) and is imported into the nucleus in a complex with Importin-8 (IPO8, Imp8, RanBP8) (Weinmann et al. 2009, Wei et al. 2014). Once in the nucleus, Imp8 in complex with the cargo interacts with RAN:GTP, causing the dissociation of Imp8 from the complex with AGO2:miRNA (Gorlich et al. 1997). Other Argonautes are also observed in the nucleus (Robb et al. 2005, Weinmann et al. 2009, Doyle et al. 2013, Ahlenstiel et al. 2012, Gagnon et al. 2014) and may be imported by the same mechanism.

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### Editions

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