MRN complex bound to DNA ends recruits ATM

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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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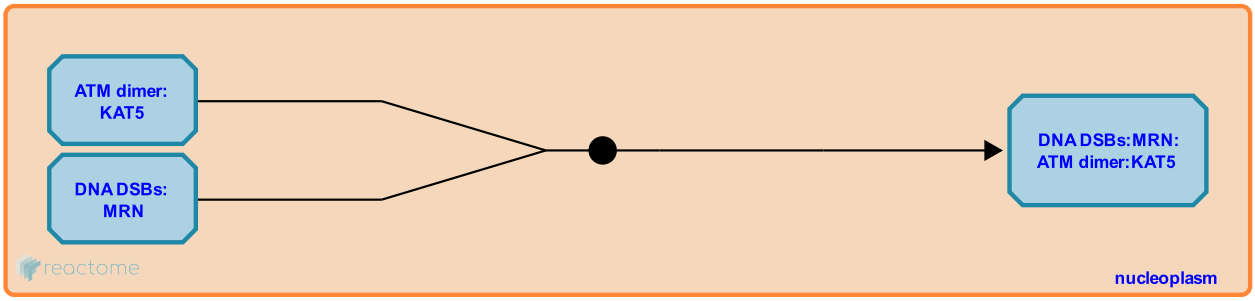
Stable identifier: R-HSA-5693612

Type: binding

Compartments: nucleoplasm



Activation of ATM kinase in response to DNA damage in the form of DNA double-strand breaks (DSBs) requires association of ATM dimers with the MRN complex bound to DNA ends. MRN subunit RAD50 is essential for ATM dimer binding (Lee and Paull 2005, Wu et al. 2007). ATM dimer exists in a preformed complex with KAT5 (Tip60) histone acetyltransferase (Sun et al. 2005).

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