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MRE11/RAD50 Double-Strand Break Repair Complex

National Cancer Institute

Source

National Cancer Institute. *MRE11/RAD50 Double-Strand Break Repair Complex*. NCI Thesaurus. Code C21177.

The MRE11/RAD50 double-strand break repair complex consists of 5 proteins: Nibrin, p200, p400, MRE11, and RAD50. This complex possesses manganese-dependent single-stranded DNA endonuclease and 3-prime to 5-prime exonuclease activities. In mammalian cells, this complex is important for double-strand break repair, meiotic recombination, and telomere maintenance. It functions in diverse aspects of the cellular response to double strand breaks (DSBs), including the detection of DNA damage, the activation of cell cycle checkpoints, and DSB repair. (from OMIM)