

Title (en)
PROTEINS AND COMPOSITIONS FOR MODULATING MITOSIS

Title (de)
PROTEINE UND ZUSAMMENSETZUNGEN ZUM MODULIEREN VON MITOSIS

Title (fr)
PROTEINES ET COMPOSITIONS PERMETTANT DE MODULER LA MITOSE

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Application
EP 97950984 A 19971217

Priority
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Abstract (en)
[origin: WO9827994A1] The protein encoded by the human gene HEC(<u>h</u>ighly <u>e</u>xpressed in <u>c</u>ancer) contains a long series of leucine heptad repeats and appears to be crucial for normal mitosis. HEC localizes to the nuclei of interphase cells and redistributes to centromeres during M phase. Ectopic expression of a mutant HEC containing only the heptad repeats results in the inability of cells to divide more than once. Inactivation of HEC results in disordered sister chromatid alignment and separation, as well as in the formation of non viable cells with multiple, fragmented micronuclei. HEC interacts through its leucine heptad repeats with several proteins involved in mitosis, including nek2, sb1.8, and two different regulatory subunits of the 26S proteasome, MSS1 and p45. These biochemical properties of HEC suggest its potential roles in modulating proteins important for spindle attachment to kinetochores, sister chromatic movement, and M phase progression.

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• See references of WO 9827994A1

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