

Abstract

Helicases are proteins capable of unwinding nucleic acids, their malfunction can be dangerous for genome stability of the cell. Five RecQ-family helicases identified in human cells participate in many cellular events during the whole cell cycle, including mitosis, and therefore are very important for correct functioning. The mutations in RecQ helicases can cause them to malfunction and seriously damage various cell processes, for example DNA replication, DNA damage control or sister chromatids separation. The mutations can also lead to dangerous syndromes, with the hallmark symptom of increased risk of cancer.