

Abstract

Caspase-8 is classified as an initiator caspase especially of death receptors-induced apoptosis. It is expressed in all tissues and depending on its regulatory circuits it plays an important role not only in the signalization of apoptosis but also in necroptosis, cell survival and other cellular processes. Its proper function is irreplaceable in general proliferation, differentiation and development, in the function of immune responses and thus maintenance of homeostasis. Its malfunction or absence is manifested by defects in both cells and organisms and it is connected with serious diseases such as cancer. This thesis summarizes the knowledge of ways of regulation and function of caspase-8 in these processes.

Key words: caspases, apoptosis, necrosis, necroptosis, DISC, activation complex