

FoxO Transcription Factors as Multifunctional Cell Regulators

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FoxO transcription factors, acting as tumor suppressors and involved in the regulation of proliferation, cell differentiation, apoptosis, cellular response to stress, aging and longevity are of intense research interest. This is partly due to the fact that the risk of cancer, like many other diseases, increases with age but a clear molecular mechanism linking cancer and aging has not yet been identified. FoxO transcription factors work at the interface between longevity and carcinogenesis control systems, and therefore, the study of the FoxO signaling and its regulation can give answers to many questions of the biology of oncology, aging and cell biology in general. The paper provides an overview of the structure, functions, and diversity of the regulatory mechanisms of FoxO transcription factors.

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