Abstract

Notch pathway plays a critical role during the development and life of metazoan organisms. CSL proteins are the component of the Notch pathway that mediates the regulation of target genes. The discovery of CSL-like proteins in yeast raised the question of their function in unicellular organisms which did not utilize the canonical Notch pathway. CSL-homologues in yeast are conserved in parts that are important for DNA binding and for fission yeast proteins it was shown that they bind to CSL recognition elements *in vitro*. In fission yeast, CSL paralogues Cbf11 and Cbf12 play antagonistic roles in cell adhesion and the coordination of cell and nuclear division. Yeast CSL proteins have long and intrinsically unstructured N-terminal domains compared to metazoan CSL proteins. In this study, we investigated the functional significance of these extended N-termini of CSL proteins by their complete removal. For newly constructed truncated variants of proteins Cbf11 and Cbf12 in *Schizosaccharomyces pombe* we observed the lack of ability to bind CSL recognition RBP probe. The removal of N-terminal parts of CSL proteins in fission yeast led to the change in their cellular localization. Once strongly preferred nuclear localization changed by the removal of N-terminal domains to cytoplasmic localization with a weaker or equal presence in the nucleus. We also observed an effect of the overexpression of mutated variants of Cbf11 that cannot bind RBP probe on abundance of endogenic Cbf11 bound to RBP probe in the ΔCbf12 strain. Our data showed that N-terminal parts of yeast CSL proteins effect DNA-binding abilities of these proteins and cellular localization. Revealing the function of the yeast CSL proteins could contribute to the knowledge of Notch-independent functions of CSL proteins in metazoa.