

ABSTRACT

Complex Exocyst consists of eight proteins and it is known as a Sec6/8. Its composition is evolutionarily highly conserved amongst all the species. This complex is involved in vesicle trafficking as a part of attaching mechanism to a specific place on the plasma membrane. EXO70 subunit has been found in 23 copies in *Arabidopsis thaliana* genome. In this study we have been examine paralogues EXO70H7 and EXO70H8. There have been suggestions that these genes are important in development of roots according to the previous studies. We have not been able to identify any significant phenotype within the mutant plants in these genes. There has been studied other mutant appearance during the stress experiments. Most of these experiments did not identify any divergence. Only experiments with germination during stress conditions revealed significantly worse germination of *exo70H7* mutant seeds on the medium containing sorbitol. This suggests that mutant seeds have a worse protection against osmotic stress. Significantly worse germination of *exo70H8* seeds on the medium with excess NaCl indicates that these seeds incriminate to higher absorption of sodium ions. Analysis of the cell localization of GFP constructs brought knowledge of appearance EXO70H7 and EXO70H8 proteins. EXO70H7 locates in the cytoplasm and in the cell nucleus with the negatively contrasting nucleolus. EXO70H8 has been found in the cytoplasm with the negatively contrasting bodies without signal. Gained information are creating new field for further research, which will specify the role of these subunits.

Key words:

exocytosis, exocyst complex, genes *EXO70*, endodermis, *Arabidopsis thaliana*