

FtsZ proteins in the moss *Physcomitrella patens*

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The bacterial cell division protein FtsZ resembles tubulin in sequence and structure and thus may be the progenitor of this eukaryotic cytoskeletal element. In land plants, several FtsZ proteins are encoded by two small nuclear gene families. Although it has been shown for some of the gene products that they are imported into plastids and play a role in plastid division, the precise function of the products from both gene families is still poorly understood.

The moss *Physcomitrella patens* harbours at least four different nuclear encoded FtsZ homologues. In the following study, we analyzed their genomic structures and evolutionary relationships. For analysis of subcellular localization, we transiently transformed *Physcomitrella* protoplasts with *ftsZ*-GFP-fusion constructs driven by the 35S-promoter. Using confocal laser scanning microscopy, we were able to show different localization patterns for all four fusion proteins.

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