KOSMOS Vol. 67, 1, 43–55, 2018

MARIA JOLANTA RĘDOWICZ

Laboratory of Molecular Basis of Cell Motility, Department of Biochemistry, Nencki Institute of Experimental Biology PAS, 3 Pasteur Str., 02-093 Warsaw, E-mail: j.redowicz@nencki.gov.pl

POSTTRANSLATIONAL MODIFICATIONS OF ACTIN

Summary

Actin, a constituent of the cytoskeleton of eukaryotic cells, is one of the most important as well as best evolutionary conserved proteins. This globular protein with molecular mass of ~42.3 kDa exists in the cell both in the monomeric and filamentous form, and ability to undergo dynamic reorganization of these two forms is absolutely crucial for cell survival. The monomer-filament transition, precisely controlled in time and space, is possible due to interaction of actin with a panoply of proteins binding to either monomeric or filamentous actin. Yet another factor is affecting actin organization, namely numerous posttranslational modifications. This review article is devoted to presentation of this broad and still unrecognized topic with emphasis on description of the type of actin modifications and how they affect actin structure and function.

Key words; actin, cytoskeleton, filament, regulation