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## HOMOLOGUES OF p48 PROTEIN FROM THE MORULA CELLS OF ASCIDIAN *STYELA RUSTICA* IN REPRESENTATIVES OF THE STOLIDOBRANCHIA ORDER

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Tunicata is an interesting phylogenetic group, at the base of the branch leading to Chordata. Ascidiaceae (Tunicata, Cl. Ascidiaceae) morula blood cells are involved in defense reactions and in the formation of the tunic extracellular matrix. The ascidian tunic is hardened as a result of sclerotization of matrix proteins due to the action of phenoloxidase enzyme, contained in morula cells. Morula cells of the ascidian *Styela rustica* contain two major proteins, the function of which is still unknown; one of them is a protein with molecular mass of 48 kDa – p48. The aim of present study was to search for possible homologues of p48 in ascidians belonging to the Stolidobranchia order: *Styela coreacea* (Styelidae), *Molgula citrina* (Molgulidae), *Boltenia echinata*, *Halocynthia aurantium* (Pyuridae) and to determine the tissue distribution of those homologues. In order to show the presence of p48 in the tissues of sea squirts we used indirect immunolabeling method on paraffin sections. It was shown that the antibodies bind with morula cells of *Styela rustica*, *Styela coreacea*, *Boltenia echinata*, with the tunic matrix in all studied species and with test cells of *Styela rustica*, *Styela coreacea*, *Boltenia echinata*, *Molgula citrina*. It gives us a ground to assume the existence of p48 homologues in all studied ascidians and to expect a common mechanism of their participation in the tunic formation, as possible substrates of the phenoloxidase system.

**Keywords:** ascidians, test cells, tunic, morula cells, p48