

IMMUNOHISTOCHEMICAL EXPRESSION OF MAP1LC3A AND MAP1LC3B PROTEIN IN BREAST CARCINOMA TISSUES

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ABSTRACT

Autophagy is a protein degradation process within the cell and its deregulation has been linked to various diseases and the formation of cancer. One of the important proteins involved in the autophagy process is microtubule associated protein 1 light chain 3 (MAP1LC3). The aims of this study were to determine the MAP1LC3A and MAP1LC3B protein expression in both normal and cancer breast tissues and to determine the relationship between the expression of these proteins and type of tissues. Immunohistochemistry assessments were carried out on tissue microarrays consisting of breast tissues. MAP1LC3A expression was detected in 52/56 of normal breast tissue cores and 65/67 of breast cancer tissue cores. MAP1LC3B expression was detected in 55/56 of normal breast tissue cores and 67/67 of breast cancer tissue cores. MAP1LC3A and MAP1LC3B protein is expressed in the majority of normal and cancer breast tissues. A large number of MAP1LC3A and MAP1LC3B positive breast cancer tissues cores have high proportion of stained cells (81-100%) as compared to normal breast tissues. However, a significantly higher number of breast cancer tissues were found to express the MAP1LC3A protein with strong immunoreactivity as compared to the normal tissues, suggesting that MAP1LC3A may play a role in breast cancer development.