Roles of the AIB1 protein in the proliferation and transformation of human esophageal squamous cell carcinoma

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ABSTRACT. The aim of this study was to investigate the expression of AIB1 in human esophageal squamous cell carcinoma and its correlation with Ki67 expression. The immunohistochemical method streptavidin-peroxidase was used to analyze the expression of AIB1 and Ki67 in specimens from 60 patients with esophageal squamous cell carcinoma and in 20 control individuals with normal esophageal tissue. Expression correlation, clinical significance, and relationships between the two groups were determined. In the 20 individuals with normal esophageal mucosa cells, AIB expression was primarily detected at low levels in the nucleus or not at all, whereas 41.6% of specimens from individuals with esophageal squamous cell carcinoma exhibited high levels of
AIB1 expression (P < 0.05). Furthermore, overexpression of AIB1 was observed more frequently in carcinoma specimens with late T stages (T3/T4) and lymph node metastases (P < 0.05). No significant differences were observed in AIB1 expression by gender, age, or pathological type (P < 0.05). Comparatively, the rate of positive expression of Ki67 in esophageal squamous cell carcinoma specimens was 65.0% (39/60) (P < 0.05). Of these, 29 specimens exhibited simultaneous expression of AIB1, 25 of which demonstrated AIB1 overexpression; expression of AIB1 and Ki67 was positively correlated (P < 0.01). In summary, the results from this study suggested that AIB1 protein expression was associated with the T stage and lymph node metastasis in esophageal squamous cell carcinoma, and that Ki67 might play a role in the AIB1 non-steroid receptor pathway.

**Key words:** Esophageal; Squamous cell carcinoma; AIB1; Ki67