

**Immunohistochemical detection of cytokeratin 14 in developing enamel organ of rat molars**

**Abstract**

Cytokeratins (CKs) are cytoskeletal intermediate filament proteins characteristic of odontogenic epithelia. The CK expression patterns of odontogenic epithelia are still poorly described. Most studies have searched for pools of CKs instead of individual polypeptides. The objective of this study was to clarify the immunohistochemical expression of individual CK polypeptides 14 in the enamel organ of rat molar at different developmental stages using monoclonal antibody LL002- Cks14. The results showed that all cells of the enamel organ were positive for CK14 and its configuration showed differences related to the stage-specific state of differentiation. A strong label for CK 14 was present at the inner dental epithelium at early bell stage, preameloblasts and ameloblasts. It is concluded that the monoclonal antibodies to CK 14 are well documented and should serve as useful tools for tracing the development and differentiation of ameloblasts. The developing enamel organ may be a suitable model for investigating the relationship between keratin expression and cell function.