

Expression of Collagen-specific Stress Protein Hsp47 in Rat Epithelial Tissue

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An immunohistochemical study was undertaken to clarify the role of collagen-specific stress protein Hsp47 in rat epithelial tissue. Basal keratinocytes of squamous epithelia including back skin epidermis and lining epithelia of oral mucosa and esophagus commonly displayed expression of Hsp47 to various extents. The most prominent expression was observed in gingival epithelium. Glomerular podocytes showed a strong expression of Hsp47. The lining epithelia of respiratory, digestive, and urinary system, renal tubules, and salivary gland did not exhibit notable expression of Hsp47. From the distributional characteristic, Hsp47 in the squamous epithelium and podocytes is presumed to play an essential role as a molecular chaperon in the folding and assembly of type IV collagen, a main constituent of basement membrane.

Key words : Hsp47, epithelial cells, basement membrane, type IV collagen