

## 카바밀화 알부민이 쥐메산지움세포의 MMP-9 생성에 미치는 영향

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### Carbamylated Albumin Increases Matrix Metalloproteinase-9 Productions in Rat Mesangial Cells

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**Objective :** Carbamylation, the binding of cyanate to amino acid lysine residues, is a post-translational modification and pathophysiological consequences of carbamylation and adverse effects of carbamylated proteins remain poorly understood. This study was designed to influence of carbamylated albumin on matrix metalloproteinase (MMP) expressions in rat mesangial cells (RMC).

**Methods and Results :** The effect of carbamylated albumin was evaluated using zymography, Western blot analysis, MMP-9 promoter luciferase assay, and ELISA. We found that carbamylated albumin significantly increased MMP-9 productions in RMCs via stimulating MMP-9 promoter activity and ERK1/2 MAPK phosphorylation. Decreased TIMP-1 activity by carbamylated albumin was also observed and the stimulatory effect of carbamylated albumin on MMP-9 activity was confirmed in primary cultured RMCs.

**Conclusion :** Taken together, we demonstrated that carbamylated albumin increased MMP-9 activity via ERK1/2 MAPK mediated pathway and further studies as to the functions of carbamylated albumin will be of merit.

**Key Words :** 카바밀화 알부민, 메산지움세포, MMP-9  
Carbamylated albumin, Mesangial cell, MMP-9