



Nagoya City University Academic Repository

学位の種類	博士 (医学)
報告番号	甲第1424号
学位記番号	第1029号
氏名	山田 健司
授与年月日	平成 26年 3月 25日
学位論文の題名	UQCRB is involved in bladder carcinogenesis in mouse and human (UQCRB はマウスおよびヒトの膀胱発がんに関与する) Nagoya Medical Journal, accepted for publication.
論文審査担当者	主査： 高橋 智 副査： 中西 真, 郡 健二郎

Genomic instability is the hallmark of most human cancers, including bladder cancer. But, its role in tumor carcinogenesis is still poorly understood. In this study, to investigate chromosomal instabilities (CIN), bladder cancer mouse model was used. As measure of CIN, DNA copy number aberrations (CNA) were investigated. According to array comparative genomic hybridization (CGH) analysis to detect CNA throughout the genome, five chromosomes with high CIN were identified, and among the candidate genes present in these regions, ubiquinol-cytochrome c reductase binding protein (UQCRB) on chromosome13B3 was further characterized. In this study, both CNA and protein expression of UQCRB in mouse model were examined. Both CNA and protein expression of UQCRB of tumor at early stages were significantly increased than control tissue and invasive cancer. In addition, it was confirmed that protein expression of inducible nitric oxide synthase (iNOS) was similar to UQCRB. Quantitative PCR and immunohistochemical analyses indicated that the CNA and the protein expression of UQCRB at low T stage were higher than those at high T stages in human bladder cancer specimens. These findings suggest that UQCRB is an indicator of bladder cancer, and may play important roles in

carcinogenesis through the regulation of iNOS.