Isolation And Characterization Of Three Novel Isoforms Of The *RECK* Tumor Suppressor Gene

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REversion-inducing Cysteine-rich protein with Kazal motifs (RECK) encodes a membrane-anchored protein that suppresses both invasion and metastasis by negatively regulating at least three MMP´s, namely: MMP-9, MMP-2 and MT1-MMP. Matrix metalloproteinase (MMP) family members are directly involved in tumor invasiveness and metastasis. In general, the relative levels of MMPs increase with tumor progression. A positive correlation has been observed between the abundance *RECK* expression in tumor samples and better prognosis for patients with gastric, lung, pancreatic and colorectal cancers. In the present study, three novel alternative isoforms of the RECK tumor suppressor gene, namely *RECK B* (1548b), *RECK D* (1737b) and *RECK I* (1101b) were isolated and characterized and their expression profiles were investigated using quantitative real time RT-PCR assays. Our results show that *RECK I* isoform display the same expression pattern when compared to the canonical form in different tumor progression systems, in the other hand *RECK B* and *D* display expression levels which inversely correlated with the histological grade of malignancy, suggesting a more complex role of both canonical and alternative *RECK* isoforms in tumor progression.

Keywords: *RECK tumor suppressor gene*, Matrix metalloproteinases, Alternative splicing.

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