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# MUTATIONAL ANALYSIS OF PROAPOPTOTIC *INTEGRIN BETA 3* CYTOPLASMIC DOMAIN IN COMMON HUMAN CANCERS

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*Aims:* **Mounting evidence indicates that deregulation of apoptosis is involved in the mechanisms of cancer development. Integrins are cell adhesion receptors that mediate cell survival and migration. A recent study showed that unligated integrin beta 3 (ITGB3) induced apoptosis by recruitment of caspase-8. The aim of the present study was to explore the possibility that genetic alteration of the *ITGB3* gene is involved in the development of human cancers possibly by inactivating the apoptosis function of *ITGB3*.**
*Methods:* **We analyzed the coding region of the cytoplasmic domain of the human *ITGB3* gene for the detection of somatic mutations in 100 gastric, 90 colorectal, 100 non-small cell lung, 43 urinary bladder and 50 head-neck cancers by a polymerase chain reaction-based, single-strand conformation polymorphism.**
*Results:* **We found an identical *ITGB3* mutation in two unrelated patient samples (one in colorectal and the other in bladder cancer). The *ITGB3* mutation was a missense mutation which would substitute an amino acid (E757K).**
*Conclusions:* **The data suggested that the proapoptotic *ITGB3* cytoplasmic domain is rarely mutated in common human cancers and may not play an important role in the development of the cancers.**

**Key words: apoptosis, cancer, integrin beta 3, mutation.**

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