

Genetic Screening of the Canine Transcription Factor AP-2 Beta (TFAP2B) Gene in Dogs with Patent Ductus Arteriosus

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Canine transcription factor AP-2 beta (*TFAP2B*) encodes a member of the AP-2 family of transcription factors and involves in the stimulation of cell proliferation and the suppression of terminal differentiation of specific cell types during embryonic development. Mutations in this gene result in certain congenital cardiac defects in human including patent ductus arteriosus (PDA).

We isolated the full length coding exon of *TFAP2B*. This gene was screened for mutation in dogs with PDA. Analysis of the deduced amino acid sequence suggested that the canine *TFAP2B* are phylogenetically closer to the human *TFAP2B* (100% identity in amino acid sequence) than mouse and rat. We are currently screening this gene in dog population having various congenital heart defects.

For identifying and characterizing a major candidate gene for canine PDA, we provided and broadened our resources for genetic screening for canine congenital heart defects.

This study was supported by Korean Research Foundation (KRF-2006-331-200369).

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