

**DETECTION OF *Wise* GENE IN  
*Mycobacterium tuberculosis***

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*Wise* (Wnt modulator In Surface Ectoderm) is a novel gene, which can modulate Wnt (Wingless-type MMTV integration site family) signaling pathway and Bone Morphogenetic Protein (BMP) signals and it is expressed in the surface ectoderm, in which Wnt signaling plays multiple roles. *Wise* was isolated as a secreted protein capable of interacting with Wnt co-receptor, Lipoprotein Receptor-related Protein 6 (LRP6). It either enhances or inhibits the Wnt pathways depending on the cellular context and it inhibits the BMP signals by binding to BMP ligands. Very little is known about the *Wise* cloned from mouse, *Xenopus* and human. *Wise* also called as Uterine Sensitization Associated Gene-1(USAG-1) and Ectodin. The aim of the present study was to detect *Wise* gene in *Mycobacterium tuberculosis*. *M. tuberculosis* is the most clinically important member of the MTB complex.

In this study PCR based assay was used to detect the presence of *Wise* gene in *M. tuberculosis*. DNA Extraction was carried out by N-Cetyl-N,N,N-tiymethyl ammonium bromide (CTAB) method from 50 *M. tuberculosis* cultures. DNA amplification was performed, targeting *Wise* gene by using specific forward primer *W2F* (5'-GCTTTTAAGAATGATGCCAC-3') and reverse primer *W2R* (5'-GTGACCACGGTGATTTTGTA-3').

Twelve strains were PCR positive along with the H37Rv standard DNA. 38 were PCR negative. With this preliminary study we can confirm the presence of *Wise* gene in *M. tuberculosis*, and PCR based assay could be used to detect *Wise* gene in *M. tuberculosis*.

