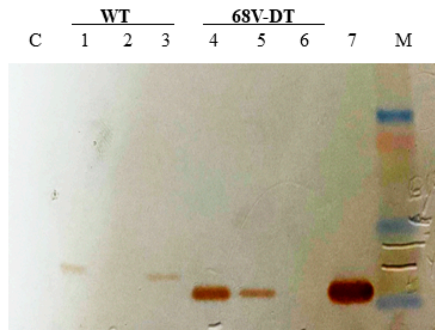
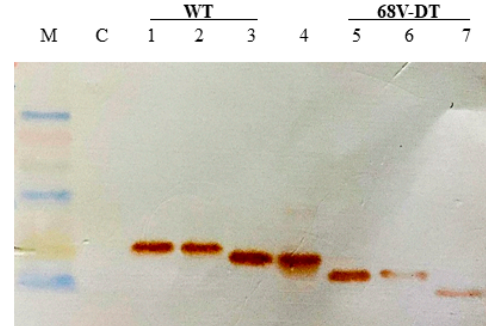


## Supplementary Data

**(A) Intracellular**



**(B) Extracellular**



**Scheme 1:** Expression and secretion analysis of wtKRAS and 68V-DT by the recombinants *L. lactis* with 40 ng/ml of nisin at 6 h. Figure (A) showing the intracellular protein fraction. M, Rainbow™ Protein Ladder; C, NZ9000 with empty vector pNZ8048 (negative control). Lane 1: NZ-SPKM19-L-WT; Lane 2, NZ-USP45-WT; Lane 3: NZ-SPK1-L-WT; Lane 4: NZ-SPKM19-L-68VDT; Lane 5: NZ-SPK1-L-68VDT; Lane 6: NZ-USP45-68VDT; Lane 7: positive control (NZ-Xyl). Figure (B) showing the extracellular protein fraction. Lane 1: NZ-SPKM19-L-WT; Lane 2: NZ-SPK1-L-WT; Lane 3: NZ-USP45-WT; Lane 4: positive control (NZ-Xyl); Lane 5: NZ-SPKM19-L-68VDT; Lane 6: NZ-SPK1-L-68VDT; Lane 7: NZ-USP45-68VDT. The positive control (NZ-Xyl) was included only for the Western blotting analysis. The NZ-USP45-WT and NZ-USP45-68VDT were not used in this study, thus were not further reported.