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Novel halotolerant isolates of *Lactococcus lactis* subsp. *lactis*, isolated from intestinal tract of coastal fish

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Lactococcus lactis is one of lactic acid bacteria used worldwide for the manufacture of fermented dairy products, such as in the cheese-making process. *Lactococcus lactis* has been already isolated from various environments including milk products and plant surface. Although *L. lactis* was previously detected by molecular techniques from intestinal tract of coastal fishes, the bacterium has not been isolated from them. In this study, we isolated *L. lactis* from the intestinal tract of the pufferfish *Takifugu niphobles*, and the isolates were identified to be *L. lactis* subsp. *lactis* by the phenotypic characterization including the carbohydrate profile and phylogenetic analysis based on the sequence of 16S ribosomal RNA gene. The salt tolerance of these isolates was higher than that of *L. lactis* subsp. *lactis* from a cheese starter culture. These *L. lactis* subsp. *lactis* isolates could grow on MRS-agar plates containing 200‰ seawater or 6% sodium chloride, suggesting that these *L. lactis* subsp. *lactis* isolates have additional functions compared with the cheese starter-derived isolate. These novel *L. lactis* isolates might be used for the development of functional foods and novel food additives for preserved food products.