Lactic acid bacteria (LAB) is a diverse group of beneficial bacteria which have been in advertently used by mankind for thousands of year. Enterococci are the dominant lactic acid bacteria (LAB) in many foods, including vegetables, meat and dairy products. Many studies indicate that these bacteria play a major role in the development of the sensory characteristics of fermented foods such as traditional cheeses, sausages and olives. The ability of enterococci to produce antimicrobial peptides known as bacteriocins that could be used as food/feed biopreservatives is also remarkable. The bacteriocins (enterocins) produced by enterococcal strains include the commonly encountered enterocins A, B, P, AS-48, L50A, L50B, 1071A, 1071B and Q. Due to the biotechnological potential of enterococci in food and health, the purpose of this study is to determine the antimicrobial activity and the occurrence of bacteriocin structural genes in Enterococcus spp. isolated from different cheeses. A total of 100 presumptive Enterococcus strains were isolated from 33 different cheese samples on KAA medium and grown in MRS broth. All isolates were Gram-positive, catalase-negative and grown at 10 °C, 37 °C and 45 °C, in the presence of NaCl (6.5%) and at pH 9.6 in Elliker broth medium. In addition all of them were found resistant to heat at 60 °C for 30 and 60 min. The 11 presumptive Enterococcus isolates showed inhibition zones against different indicator microorganisms. Proteinase K treatment showed that antimicrobial substances of 11 isolates have proteinous nature. The 11 enterocin producer isolates were identified genotypically by 16S rDNA homology and determined as E. faecalis (5) and E. faecium (6) with the similarity percentage of 93-99% when 16S rDNA PCR amplicons compared to GenBank. Enterocin genes were detected with using most common enterocin primers. The entA gene was detected in 7 strains while 8 strains carry entX gene. The entB and entP genes were detected in 4 and 2 strains, respectively. The genes coding for enterocin L50A/B, bacteriocin 31, enterocin AS-48, enterocin Q,enterocin 1071 and enterocin cylL/L/S were not detected in any Enterococcus strains. In the present study enterocins were identified using known enterocin primers and multiple enterocin genes were detected in 7 strains. Two unidentified enterocins should be investigated whether the new bacteriocins.