*Growth hormone (GH) is a promising candidate gene marker for selecting production traits in livestock animals. The objective of the present study was to determine the polymorphism in exon 3, intron 3 and exon 4 of GH gene in 39 Najdi and 38 Naeimi sheep breeds of Saudi Arabia. A 934 bp fragment was amplified, sequenced and seven single nucleotide polymorphisms (SNPs) were identified: two synonymous in positions G985T and A1048G of exon 3, one non-synonymous in position G1386A of exon 4 and four in positions A1100G, C1103T, G1191A and C1289G of intron 3. Frequencies of allele G at positions G985T, A1048G, G1191A and C1289G were similar (P>0.05) between Najdi and Naeimi sheep, whereas its frequency at position A1100G was higher (0.16 vs. 0.02) in Naeimi (P<0.05) than Najdi sheep. At loci C1103T, G1191A and G1386A, alleles T and A were not found in the Najdi sheep and their frequencies averaged 0.07 in Naeimi sheep. Five genotypes in Najdi and eleven genotypes in Naeimi sheep were recognized at the seven polymorphic positions: three genotypes (G01-G03) in Najdi and five genotypes (G01-G05) in Naeimi were homozygous. The most common genotypes present in the Saudi Arabian sheep were genotypes G01, G02 and G07 with frequencies of 30.8, 43.6 and 15.4% in Najdi and 28.9, 23.7 and 18.4% in Naeimi sheep, respectively. Genotype G08 was found only in the Najdi sheep whereas genotypes G04-G06 and G09-G12 were detected only in the Naeimi sheep. Twelve representative genotype sequences from Najdi and Naeimi sheep have been deposited in the NCBI GenBank database.*