OBJECTIVE: The most common mechanism of resistance to B-lactam antibiotics is the production of beta-lactamases. Acquired beta-lactamases encoded by mobile genetic elements are an important resistance mechanism in Acinetobacter baumannii. Strains producing PER-1 have been reported from various geographic areas of the world, but PER-1 type beta-lactamases from Turkish hospitals have not yet been known. This paper aimed to determine the incidence of PER-1 type beta-lactamases in A. baumannii isolates in different regions of Turkey. MATERIALS-METHODS: A total of 763 clinical isolates of A. baumannii were collected at nine university hospitals and two state hospitals from 2008 to 2011. The isolates were identified by conventional techniques and automatized systems, including the Vitek system and the Phoenix 100 system. Molecular identification for verification was carried out by an amplified OXA-51 gene within the A. baumannii genome. The susceptibilities of the isolates were tested using the standard disc diffusion method on Mueller Hinton agar plates and using the breakpoints defined by the Clinical and Laboratory Standards Institute. RESULTS: PER-1 was detected in 188 (24.6%) strains of 763 isolates. The high rates of PER-1 producing isolates were 74.2%, 72.1%, 46.9%, and 32.3% in Van in the year 2008, Bolu in the year 2009, Kahramanmaras in the year 2008, and Konya in the year 2009, respectively. There was a statistically significant difference between the rates of PER-1 producing isolates from different locations in Anatolia (X²-test, p<0.001). CONCLUSION: Outbreaks of resistant A. baumannii are increasing in several parts of Turkey. This pathogen successfully spread among patients of different hospitals and cities. PER-1 type beta-lactamases should be investigated in other countries to detect the spread of resistant genes. Keywords: Acinetobacter baumannii, resistance, beta-lactamases, PER-1, Turkey