The aim of this work was to prepare the synthetic 5'UTR sequence of splicing variant Var 14 of glutamate carboxypeptidase II (GCPII). A method of two-step PCA was used to this purpose. The sequence was divided into 8 overlapping oligonucleotides that were combined into a single dsDNA by two consecutive PCR. Product of the synthesis was cloned into the auxilliary cloning vector pUC19. After the sequencing analysis detected mutations were corrected. The product was subcloned into the target vector pcDNA4 His Var 14 which already contained the sequence GCPII gene. This construct was then used for the construction of the calibration curve, which will serve as a standard for RT-PCR for quantitative detection of this variant of GCP II in patients with prostate cancer. Construct will be further used as an expression vector to produce of the variants Var 14 GCPII in eucaryotic baculovirus expression system.

Keywords: 5'UTR, two-step PCA, pUC19, RT-PCR, GCPII