Besides being a marker for a diminishing follicle pool, serum anti-Müllerian hormone (AMH) level can also serve as a marker in ovarian pathophysiology, such as polycystic ovary syndrome (PCOS), in which the antral follicle pool is enlarged. The aim of the present study was to establish the optimal cutoff point of AMH and to evaluate its diagnostic value to diagnose PCOS. A cross-sectional study was performed in 90 women diagnosed with PCOS according to the Rotterdam criteria and 50 healthy control subjects. Body mass index, reproductive hormones, serum AMH and metabolic syndrome-related variables were measured in all subjects. Its diagnostic potential was evaluated by Receiver Operating Characteristic (ROC) curves. Serum AMH levels were significantly (p <0.001) higher in women with PCOS. ROC curve analysis showed a cutoff point for AMH of 4.96 ng/mL (sensitivity 73.03%, specificity 92.0%) for diagnosis of PCOS. There were no correlations between serum AMH and metabolic parameters. AMH determination has high specificity and sensitivity as a diagnostic marker for PCOS.