

We strictly followed the same detailed protocols and used the same brand of reagents and consumables for sample collection. **Serum samples:** Fasting blood was drawn into additive-free vacuum blood collection tubes, taking care to avoid hemolysis. Samples were left to clot naturally for 30 minutes and then centrifuged for 10 minutes at 3000 rpm and 4°C. Following centrifugation, the serum supernatant was aliquoted into storage tubes, promptly frozen in liquid nitrogen, and stored at -80°C until analysis.