BETA-2 MICROGLOBULIN, SERUM

Beginning 11/19/2013 the Special Chemistry section of the Department of Pathology and Laboratory Medicine will begin performing the Beta-2 Microglobulin, serum assay inhouse. This assay was previously sent to UCSF. Our methodology and instrumentation will be the same as UCSF. The method is turbidimetric and the analyzer is The Binding Site’s SPA Plus.

Beta-2 Microglobulin (B2M) is a small membrane protein associated with the heavy chains of class I major histocompatibility complex proteins and is, therefore, on the surface of all nucleated cells. The small size allows B2M to pass through the glomerular membrane, but it is almost completely reabsorbed in the proximal tubules.

Serum B2M levels are elevated in diseases associated with increased cell turnover. Levels are also elevated in several benign conditions such as chronic inflammation, liver disease, renal dysfunction, some acute viral infections, and a number of malignancies, especially hematologic malignancies associated with the B-lymphocyte lineage.

In multiple myeloma, B2M is a powerful prognostic factor and values <4 mg/L are considered a good prognostic factor. In renal tubular disease, serum levels are low and urine levels are high.

Clinical history and other laboratory findings should be used in conjunction with B2M for diagnosis and treatment.

Sample Requirements

Collect:
One 4-mL SST (gold top) or serum (red top) vacutainer tube. (Minimum volume of serum: 0.5 mL). Avoid hemolysis.

Patient Preparation:
An 8 hour fast is recommended to avoid lipemia.

Specimen Preparation:
Separate serum from cells as soon as possible.

Storage/Transport:
Transport separated serum at 2-8°C. Serum is stable 7 days at 2-8°C; for longer term storage, freeze at -20°C.

Unacceptable Conditions:
Sample type other than serum. GROSSLY LIPEMIC or GROSSLY HEMOLYZED samples.

Reference Interval: 0.8 – 2.34 mg/L

Routine Testing: Thursday day shift, STAT testing is not available.

If you have questions or need additional information please contact Laboratory Client Services at 734-7373 or email pathologyclientservices@ucdmc.ucdavis.edu.