

ANNOUNCEMENT

Date: January 31, 2012

Dear Valued Clients:

Foundation Laboratory is pleased to announce that effective January 30, 2012 Beta-2-microglobulin will be performed in-house.

Beta-2-microglobulin also known as “B2M” molecules are present on nucleated cells (excluding red blood cells). In humans, the beta-2-microglobulin protein is encoded by the B2M gene. It lies laterally to the alpha 3 chain on the cell surface and it functions in regulating endocytosis of iron into intestinal cells. Loss of this function causes iron excess and hemochromatosis. In patients on long term hemodialysis , it can aggregate into amyloid fibers that deposits in joint spaces causing dialysis-related amyloidosis.

Beta-2-microglobulin is plentiful on the surface of white blood cells. Increased production or destruction of these cells causes B2M levels in the blood to increase. This increase is seen in patients with cancers involving white blood cells, but it is particularly meaningful in people newly diagnosed with multiple myeloma. With involvement of plasma cells in multiple myeloma, the beta-2-microglobulin levels reflect how advanced the disease is and the likely prognosis of the patient.

When kidney disease is suspected, comparing blood and urine levels helps identify where the kidney is damaged. Beta-2-microglobulin normally is filtered out of the blood by the kidney’s glomeruli, only to be partially reabsorbed back into the blood when it reaches the kidney’s tubules. In glomerular kidney disease, the glomeruli can’t filter it out of the blood, so levels increase in the blood and decreases in the urine. In tubular kidney disease, the tubules can’t reabsorb it back into the blood, so urine levels rise and blood levels fall. After a kidney transplant, increased blood levels may be an early sign of rejection.

Increased urinary levels are found in people with kidney damage caused by the high exposure to heavy metals cadmium and mercury. Beta-2-microglobulin levels also rise during infection with some viruses, including Cytomegalovirus and human immunodeficiency virus (HIV). Studies show that as HIV disease advances, beta-2-microglobulin levels rise.

Specimen requirements:

- 1 mL Serum Separation Tubes (SST) or 1 Urine cup (Frozen at -20°C)
- Specimen Stability is 7 days (Refrigerated 2°-8°C)

Turnaround Time: 4 days

For supplies and other needs please contact your Foundation Laboratory representative.

Sincerely,

Reza M. Massoumi, Ph.D.
Laboratory Manager