

Cystatin C, Urine

Analyte: Cystatin C

Specimen Type: Urine (stabilizer recommended - contact nexelis for further info)

Optimum Volume: 2 mL

2-8°C -20°C -70°C

6 days N.A.* N.A.*

Reporting units: ng/mL; ng/mg Creatinine (normalized)

Method: ELISA

Biological or Clinical Significance:

Cystatin C is a small, 13 kDa, non-glycosylated basic protein belonging to the cystatin super-family of cysteine protease inhibitors. Cystatin C is produced by virtually all nucleated cells, and is present in all body fluids investigated. The production rate is constant and is unaltered in inflammatory conditions. In the normal kidney, cystatin C is almost freely filtered through the glomerular membrane and then nearly completely reabsorbed and degraded by the proximal tubular cells. Therefore, the plasma concentration of cystatin C is almost exclusively determined by the glomerular filtration rate (GFR), making Cystatin C an excellent indicator for GFR.

Principle of Test Method:

The cystatin C assay is a solid phase ELISA designed to measure cystatin C in cell culture supernates, serum, plasma, saliva, urine, and human milk. This assay employs the quantitative sandwich enzyme immunoassay technique.

Cystatin C is reported as a normalized ratio to urinary creatinine in order to account for variations in urine flow rate. Therefore cystatin C and urine creatinine are preferably tested from the same aliquot.

*Please contact nexelis for stability information.

References:

1. Beilby J, Divitini ML, Knuiman MW, Rossi E, Hung J. Comparison of cystatin C and creatinine as predictors of cardiovascular events in a community-based elderly population. Clin Chem. 2010; 56:799-804.