TECHNICAL INFO: 8-hydroxy-2-deoxy guanosine TEST FOR URINE

Method / Test type	**ELISA / Quantitative**
Sample	**Urine in sterile container without additives**
Sample volume	**4 ml**
Min. volume accepted	**2 ml**
Sample collection	**Collect urine using normal process – pour off required sample volume into clean sterile container suitable for shipping.**
Shipping	**Ship frozen or refrigerated, for next-day delivery. Frozen is recommended.**
Stability	**30 days at -20°C (Frozen); OR 7 days at 4°C (Refrigerated)**
Rejection criteria	**Sample that is not urine.** **Clearly contaminated sample – bacterial, fungal, blood, foreign objects.** **Sample arriving outside of stability.**
Reference range	**0.71 – 21.55 ng/mg creatinine**
Reporting time	**3 days (from lab receipt)**
Significance	**8-hydroxy-2-deoxy guanosine (8-OHdG) is produced from oxidative damage of DNA and has been used as a marker of oxidative stress. Increased levels of 8-OHdG have been associated with aging, various cancers, hypertension, and diabetes.** **The kidneys actively filter free 8-OHdG out of bloodstream into urine hence the preferred (least complex, and non-invasive) matrix for the measurement of free 8-OHdG is urine.**
Test specifics	**This 8-OHdG ELISA is a competitive ELISA that can be used for quantification of 8-OHdG in urine.** **To summarize the assay: this ELISA utilizes an 8-hydroxy-2-deoxy guanosine-coated plate. Samples or standard concentration(s) of 8-OHdG are incubated in each well with an HRP-conjugated 8-OHdG specific-antibody.** **Washing removes antibody not bound to the 8-OHdG coated to plate.** **For color development TMB (a colorimetric substrate for HRP) is added to each well, incubated in dark for fixed time, a stop solution is added and the plate read at 450nm. The higher the level of color development, the lower the concentration of 8-OHdG in the sample or standard originally in the well. Based on the standards used, the assay range is 0.94 - 60 ng/mL, with a sensitivity of 0.59 ng/mL.**