



LAB #: Sample Report
PATIENT: Sample Patient
ID:
SEX: Female
DOB:

AGE: 52

CLIENT #: 12345
DOCTOR: Sample Doctor MD
Doctor's Data, Inc.
3755 Illinois Ave.
St. Charles, IL 60174 U.S.A.

DNA/RNA Oxidative Damage Assay; Urine

	RESULT / UNIT	REFERENCE INTERVAL	LOW	MODERATE	HIGH		
8-hydroxy-2'-deoxyguanosine* (8-OHdG)	5.2 ng/mg creat	< 7.5	██████████	██████████	██████████		
			PERCENTILE				
			2.5 th	16 th	50 th	84 th	97.5 th
Creatinine	74.5 mg/dL	30- 225	██████████	██████████	██████████	██████████	██████████

Oxidation of DNA and RNA occurs most readily at the guanine residues and measurement of these biomarkers in urine provides a quantitative assessment of oxidative stress. Although about 20 oxidative lesions in DNA have been identified to date, RNA is more sensitive to reactive oxygen species in part due to their compartmentalization in the cytosol as well as the nucleus. The most abundant lesion in DNA and RNA is 8-hydroxyguanosine (8-OHG); 8-OHG is the only measurable oxidized RNA lesion. With respect to oxidized DNA lesions, 8-hydroxy-2'-deoxyguanosine (8-OHdG) and its analog 8-hydroxyguanine are the most commonly studied and detected by-products of DNA damage that are excreted in the urine upon DNA repair. Urinary 8-OHdG and its analogs, 8-OHG and 8-hydroxyguanine, are sensitive biomarkers of oxidative stress and have been associated with many diseases, including bladder and prostate cancer, cystic fibrosis, atopic dermatitis and rheumatoid arthritis, Parkinson's disease, Alzheimer's disease and Huntington's disease. Elevated levels of DNA and RNA damage have been measured in a wide range of neurological conditions.

SPECIMEN DATA

Comments:

Date Collected: **09/16/2021** Collection Period: **Random** **<dl:** less than detection limit
 Date Received: **09/22/2021** Volume:
 Date Completed: **09/29/2021**
 Methodology: **LC-MS/MS**

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