

Order: SAMPLE REPORT



Client #: 12345

Doctor: Sample Doctor

Doctor's Data, Inc.

3755 Illinois Ave.

St. Charles, IL 60174

Patient: Sample Patient

Age: 35

Sex: Female

Sample Collection

Date/Time

Date Collected

01/01/2020

Date Received

1/02/2020

Date Reported

1/03/2020

Specimens Collected

1

Analyte	Result	Unit	L	WRI	H	Reference Interval
β -glucuronidase*	1549	U/L				100 – 1200

Information:

- β -glucuronidase (β -G) is an enzyme that breaks the tight bond between glucuronic acid and toxins in the intestines. The liver and intestine bind toxins, steroid hormones and some dietary components to glucuronic acid. That is a protective process that limits absorption and enterohepatic resorption of toxins, and enhances excretion. A high level of activity of β -G in the gut is not desirable. A low level of β -G activity is not known to be of any direct clinical consequence.

β -glucuronidase is produced by the intestinal epithelium and certain intestinal bacteria. Observational studies have indicated a *correlation* between high β -G activity and certain cancers, but a definitive *causal* relationship has not been established. Higher levels of β -G have been associated with higher circulating estrogens and lower fecal excretion of estrogens in premenopausal women. A potential dietary carcinogen derived from cooked meat and fish induces high β -G activity and prolongs internal exposure to the toxin in an experimental animal model.

Diet and intestinal bacterial imbalance modulate β -G activity. High fat, high protein and low fiber diets are associated with higher β -G activity compared to vegetarian or high soluble fiber diets. Higher β -G may be associated with an imbalanced intestinal microbiota profile. Some major bacterial producers of fecal β -G include *Bifidobacterium*, *Lactobacillus*, *Escherichia coli*, *Clostridium*, *Bacteroides fragilis* and other *Bacteroides* species, *Ruminococcus gnavus*, and species that belong to the genera *Staphylococcus* and *Eubacterium*.

Low β -G activity is an indicator of abnormal metabolic activity among the intestinal microbiota that may be influenced by dietary extremes, diminished abundance and diversity of the intestinal microbiota, or heavy probiotic and/or prebiotic supplementation. A low fat, low meat and high fiber diet, such as consumed by strict vegetarians, may be associated with lower β -G activity compared to a typical "Western diet." High-end consumption of soluble fiber (e.g. inulin) and supplementation with *Lactobacillus acidophilus* may be inconsequentially associated with lower fecal β -G.

Notes:

RI= Reference Interval, L (blue)= Low (below RI), WRI (green)= Within RI (optimal), WRI (yellow)= Within RI (not optimal), H (red)= High (above RI)

*This test was developed and its performance characteristics determined by Doctor's Data Laboratories in a manner consistent with CLIA requirements. The U. S. Food and Drug Administration (FDA) has not approved or cleared this test; however, FDA clearance is not currently required for clinical use. The results are not intended to be used as a sole means for clinical diagnosis or patient management decisions.

Methodology: Elisa

