

Biology and Disease

Insulin is an important metabolic hormone produced by islet cells within the pancreas whose primary function is to regulate blood sugar levels in the body. When blood glucose level is high (ie. after food ingestion), insulin increases glucose uptake and forces liver cells to convert glucose to glycogen for storage. Insulin is also known to promote glycolysis, fatty acid synthesis and amino acid uptake. Patients who do not produce sufficient insulin (Type 1) or become resistant to insulin (Type 2) develop diabetes mellitus and suffer from hyperglycemia, which can lead to complications such as blindness, cardiovascular disease, and kidney damage. Many insulin analogs, which mimic either normal or rapid-acting (ie. lispro) insulin functions have been developed as treatment for diabetes.

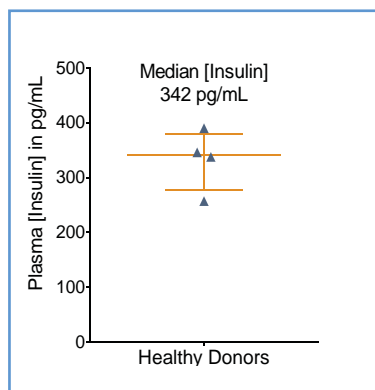
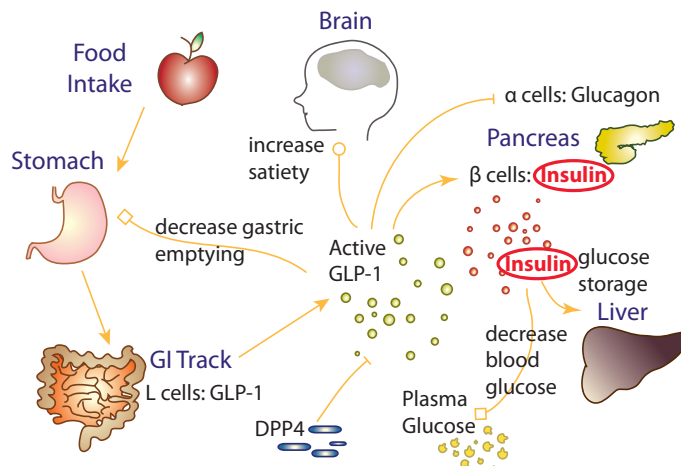


FIGURE 1: [Insulin] in EDTA plasma from 4 healthy donors, with median and interquartile range.

The Erenna® Human MP-based Insulin Immunoassay Evaluation Reagent Kit reliably quantifies insulin in healthy subjects, who have a median [insulin] of 342 pg/mL that is well above the detection limit of 0.1 pg/mL.

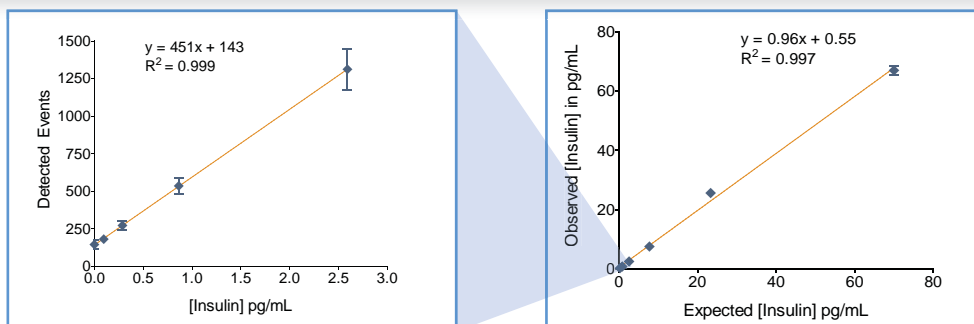


FIGURE 2: Erenna® Human MP-based Insulin Immunoassay Evaluation Reagent Kit low-end standard curve signal (left) and curve fit (right).

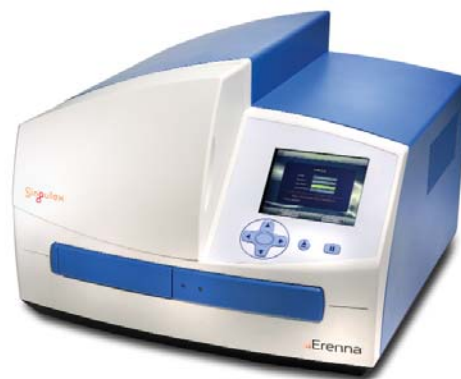
TABLE 1: Analytical sensitivity of the Erenna® Human MP-based Insulin Immunoassay Evaluation Reagent Kit¹

Lower Limit of Detection	0.1 pg/mL
Lower Limit of Quantification ²	0.3 pg/mL
Upper Limit of Quantification	70 pg/mL
Low-end CV% Range	9 - 10%
Low-end CV% Average	10%
Assay Volume	100 µL
Minimum Sample Volume Required ³	1 µL

¹ see product insert for updated values

² LLoQ ≤ 20% CV and ± 20% recovery

³ based upon median [Insulin] in a healthy reference population



Representative data shown for demonstration purposes only. Individual results may vary depending upon samples tested and protocol used.