

## Ghrelin, Total

**Analyte:** Ghrelin, Total

**Specimen Type:** EDTA Plasma with stabilizer; please contact PBI for collection instructions

**Optimum Volume:** 0.5 mL

**Stability:**

| 2-8 Degrees C | -20 Degrees C | -70 Degrees C |
|---------------|---------------|---------------|
| 3 days        | 3 months      | 3 years       |

**Reporting Units:** pg/mL

**Method:** ELISA

**Biological or Clinical Significance:**

Ghrelin is an acylated peptide with growth-hormone-releasing function. It consists of 28 amino acids and the n-octanoylation of serine-3 position in the molecule is necessary for its bioactivity. Originally found as an endogenous ligand for the growth hormone secretagogue receptor in the pituitary gland, it distinguishes itself from the hypothalamic growth hormone-releasing hormone as another potent stimulator for growth hormone secretion. In addition to its growth hormone secretagogue activity, ghrelin also increases appetite and food intake, expands body fat mass, and directs fuel selection for oxidation toward carbohydrates. It is also an important orexigenic hormone in the regulation of energy homeostasis. Ghrelin secretion increased in the fasted state and decreased in the fed state.

**Principle of Test Method:**

The Ghrelin Total assay is a solid-phase ELISA designed to measure human Ghrelin Total in serum and plasma. It employs the quantitative sandwich enzyme immunoassay principle.

**References:**

1. Groschl M, Wagner R, Dotsch J, Rascher W, Rauh M. Preanalytical influences on the measurement of ghrelin. Clin Chem 2002; 48: 1114-1116.
2. Garcia JM, Iyer D, Poston WSC, Marcelli M, Reeves R, Foreyt J, Balasubramanyam A. Rise of plasma ghrelin with weight loss is not sustained during weight maintenance. Obesity 2006; 14:1716-1723.
3. Foster-Schubert KE, McTiernan A, Frayo RS, Schwartz RS, Rajan KB, Yasui Y, Tworoger SS, Cummings DE. Human plasma ghrelin levels increase during a one-year exercise program. J Clin Endocrinol Metab 2005; 90: 820-825.