

Ghrelin, Acylated

Analyte: Ghrelin, Acylated

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

Optimum Volume: 0.5 mL

2-8°C -20°C -70°C

1 day N.A. 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 (appetite suppressing) hormone in the regulation of energy homeostasis. Ghrelin secretion increased in the fasted state and decreased in the fed state. Ghrelin activity requires acylation with the fatty acid, octanoic acid, at the serine residue in the third position of this 28 amino acid peptide hormone. To prevent hydrolysis of the octanoylated active ghrelin, plasma or serum for ghrelin assay must be acidified immediately after specimen processing.

Principle of Test Method:

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