

## Glucagon - RIA

**Analyte:** Glucagon

**Specimen Type:** Plasma from BD P700 or P800 or P100, EDTA Plasma with preservatives; contact PBI for collection instructions

**Optimum Volume:** 1.5 mL

**Stability:**

2-8 Degrees C	-20 Degrees C	-70 Degrees C
5 days	2.5 months	1 year

**Reporting Units:** pmol/L

**Method:** RIA

**Biological or Clinical Significance:**

Glucagon is a 29 amino acids straight chain peptide secreted by the alpha cells of the Islets of Langerhans in the pancreas. Its action is antagonistic to insulin, which is secreted by the pancreatic beta cells. Glucagon is involved in the regulation of circulating glucose levels. It is secreted in response to hypoglycemic conditions. Glucagon determinations are relevant to patients with insulin dependent diabetes and who may suffer from defective counterregulation, characterized by a combined deficiency of glucagon and epinephrine. These abnormalities may put the patient at risk for severe insulin-induced hypoglycemic episodes. Glucagon also plays a role in the amino acid metabolism. Elevation of glucagon in plasma decreases amino acids whereas glucagon deficiency increases plasma amino acids. Glucagon levels may be extremely elevated in certain pancreatic tumors.

**Principle of Test Method:**

The Glucagon assay is a competitive radioimmunoassay designed to measure human glucagon in serum and plasma.

**References:**

1. Abdul-Ghani M, DeFronzo RA. Fasting hyperglycemia impairs glucose-but not insulin-mediated suppression of glucagon secretion. J Clin Endocrinol Metab 2007, 92: 1778-1784.
2. Tahara Y, Tanaka A, Yamamoto Y, Fukuda M, Kumahara Y, Shima K. Discrepancy of fasting plasma glucagon levels measured by different glucagon antisera. Diabetes Res. 1988, 7: 179-183.