LABORATORY REPORT

Redcliffe labs

Patient NAME			
DOB/Age/Gender		Report STATUS	
Patient ID / UHID		Barcode NO	
Referred BY		Sample Type	
Sample Collected		Report Date	

Test Description	Value(s)	Unit(s)	Reference Range

HOMA- IR With C Peptide

Insulin Fasting

Insulin (Fasting) *CMIA*	5.2	µlU/ml	2.6 - 24.9

Interpretation:
Note
1. A single random blood sample for insulin may provide insufficient information due to wide variation in the time responses of insulin levels and blood glucose.
2. Stimulation of insulin secretion may be caused by many factors like hyperglycemia, glucagon, amino acids, growth hormone and catecholamines.
3. Interference in insulin assay is seen due to insulin antibodies which develop in patients treated with bovine or porcine insulin.
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Clinical Utility
1. Evaluation of fasting hypoglycemia
2. Evaluation of Polycystic Ovary syndrome
3. Classification of Diabetes mellitus
4. Predict Diabetes mellitus
5. Assessment of Beta cell activity
6. Select optimal therapy for Diabetes
7. Investigation of insulin resistance
8. Predict the development of Coronary Artery Disease

Increased levels - Insulinoma, Some Type II diabetic patients, Infantile hypoglycemia, Hyperinsulinism, Obesity, Cushing's syndrome, Oral contraceptives, Acromegaly, Hyperthyroidism
Decreased levels - Untreated Type I Diabetes mellitus

Dr. Sonali Pahuja
Consultant Pathologist

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C Peptide Fasting			
C - PEPTIDE (Fasting) *ECLIA*	2.19	ng/mL	1.1 - 4.4

Interpretation:
Clinical Use
1. Assess pancreatic islet cell function
2. Distinguish insulin secreting tumors (Insulinoma) from exogenous insulin administration as a cause of hypoglycemia (commercial insulin does not contain C-peptide). Sera from Insulinoma patients have high insulin and high C-peptide levels whereas hypoglycemia from injected or exogenous insulin shows high insulin and low C-peptide levels.
3. Distinguish Type I and Type II Diabetes mellitus

Increased Levels –
Insulinoma & Type II Diabetes

Decreased Levels-
Type I Diabetes & Exogenous insulin administration

Dr. Poulami Sarkar
MBBS,MD (Biochemistry)
Consultant Biochemist
NMC Certificate No. 24-005955

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Beta Cell Function (%B)

Beta Cell Function (%B)	63.0		

Interpretation:
1. Beta cells are specialized cells in the pancreas that produce and release insulin. This hormone helps regulate blood sugar levels by facilitating glucose uptake into cells for energy or storage. Dysfunction of beta cells can lead to insufficient insulin production, resulting in elevated blood sugar levels and diabetes.

2. The beta cell function (%B) blood test evaluates how beta cells function, produce, and release glucose in response to changes in blood sugar levels. It provides insight into the capacity of beta cells to regulate blood sugar and maintain glucose homeostasis.

3. Beta cell function (%B) is calculated using mathematical models that assess the relationship between insulin secretion and blood glucose levels.

Insulin Sensitivity (%S)

Insulin Sensitivity (%S)	144.6		

Interpretation:
1. Insulin sensitivity refers to the body's ability to respond to insulin by taking glucose from the bloodstream and using it for energy or storage. High insulin sensitivity means the body requires lower insulin levels to maintain normal blood sugar levels. In contrast, low insulin sensitivity, also known as insulin resistance, means higher insulin levels are needed to achieve the same effect.

2. The insulin sensitivity (%S) blood test evaluates how efficiently your body uses insulin to lower blood sugar levels. It is often ordered in individuals with suspected insulin resistance or metabolic syndrome, a cluster of conditions that increase the risk of heart disease, stroke, and type 2 diabetes.

Dr. ShashiKant D.
MD Pathologist

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HOMA IR Index

HOMA IR Index	0.69		> 1.8 cutoff indicates Insulin resistance

Interpretation:
The software does not accept Plasma Glucose values less than 54.1 mg/dL and more than 450.5 mg/dL, and Serum Insulin values less than 2.9 µU/mL and more than 57.6 µU/mL, for calculation of HOMA IR. Therefore,for values outside the above mentioned ranges, HOMA IR Index ,Beta Cell Function (%B) and Insulin Sensitivity (%S) cannot be reported.

*** End Of Report ***

Dr. ShashiKant D.
MD Pathologist

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2. It is to be presumed that the tests performed pertain to the specimen/sample attributed to the Customer's name or identification. It is presumed that the verification particulars have been cleared out by the customer or his/her representation at the point of generation of said specimen / sample. It is hereby clarified that the reports furnished are restricted solely to the given specimen only.

3. It is to be noted that variations in results may occur between different laboratories and over time, even for the same parameter for the same Customer. The assays are performed and conducted in accordance with standard procedures, and the reported outcomes are contingent on the specific individual assay methods and equipment(s) used, as well as the quality of the received specimen.

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