# **C-Pepticle of Insulin** Enzyme-Linked Immunoassay Kit



Insulin is a member of a family of structurally-related regulatory proteins; other proteins in this group include the insulin-like growth factors and relaxin. It is the most important hormone of the fed-state and is the only physiologic hormone which significantly lowers blood glucose levels. Insulin concentrations tend to be higher in obese individuals, particularly those with an increased proportion of visceral (abdominal) fat. Glucose counter-regulatory hormones, such as glucagon, glucocorticoids, growth hormone and epinephrine, decrease insulin sensitivity and action; insulin levels may increase during exogenous administration of these substances.

Measurement of circulating insulin concentrations may be useful in the clinical evaluation of several conditions. Elevated serum insulin levels in the presence of low glucose concentrations may be indicative of pathologic hyperinsulinism, e.g. nesidioblastosis and islet-cell tumor. High circulating insulin concentrations may be involved in the pathogenesis of hypertension and cardiovascular disease. Conversely, low insulin concentrations in the presence of hyperglycemia suggests insulin-deficiency, e.g. insulin-dependent or Type I diabetes mellitus. In addition, C-peptide of Insulin assays may be analytically more sensitive than insulin assays. Because of these factors, measurement of C-peptide of Insulin may be useful in evaluating insulin secretion in a variety of clinical conditions.

## **ANSH LABS ADVANTAGES**



Known amounts of C-Peptide were added to four serum samples containing different levels of endogenous C-Peptide. The concentration of C-Peptide was determined before and after the addition of exogenous C-Peptide and the percent recovery was calculated.

Sample	Endogenous Conc. (ng/mL)	Expected Conc. (ng/mL)	Observed Conc. (ng/mL)	% Recovery
Ť	1.4560	1.928 2.400 2.873	2.001 2.499 3.016	104 104 105
2	0.9130	1.412 1.912 2.411	1.510 2.049 2.621	107 107 109
3	0.7750	1.281 1.788 2.294	1.360 1.951 2.460	106 109 107
4	0.1790	0.715 1.251 1.787	0.847 1.433 1.955	118 115 109

#### Specific to C-PEPTIDE

Does not show any cross-reactivity to Oxyntomodulin, Glucagon, GLP-1, GLP-2, GRPP, Insulin, IGF- I, IGF- II

#### Analytical measurable range of approximately 0.2 -10.9 ng/mL Wide dynamic range for detection of C-Peptide in studies of a variety of physiological states.

Sensitive to 0.018 ng/mL

Rit includes all reagents needed to run a 96-well plate, shipped at ambient temperatures and stored at 2-8°C

No need to buy or make additional reagents.

#### Long shelf-life

24 months from the date of manufacture; minimizing assay lot changes for long term studies.

## **S**pecific

The monoclonal antibody pair used in the assay detects human, bovine, canine, rabbit, and goat C-peptide and does not cross-react to other closely related analytes at 1000 ng/mL as shown.

Sample Name	% Cross-reactivity		
Oxyntomodulin (1-37)	ND		
Glucagon (1-29)	ND		
GLP-1 (7-36)	ND		
GLP-1 (9-36)	ND		
GLP-2 (1-34)	ND		
GRPP	ND		
insulin	ND		
IGF+I	ND		
IGF-II	ND		



# **C-Peptide of Insulin**

## **Product Listing**

#### C-PEPTIDE is a useful research tool in studies related to:

Hyperinsulinism

Insulin resistant glucose intolerance

- Distinguish T1DM from T2DM
- Hypertension and cardiovascular disease

## **ELISA 96 Wells**

Method	Quantitative 3-step sandwich type immunoassay		
Incubation Time	Total 1 hour incubation at room temperature		
Approximate Dynamic Range	6 points, 0.2-10.9 ng/mL		
Sensitivity	0.018 ng/mL		
Sample Size / Type	20 μL / Serum, Plasma		
Shelf-life	24 months		
Catalog Number	AL-151		
••••••			

## **Related Assays**

Glucagon	96-Well ELISA	AL-157 [FDA, CE]
••••••	•••••••••••••••••••••••••••••••••••••••	•••••
PCOCheck AMH	96-Well ELISA	AL-196 [CE]
Glicentin	96-Well ELISA	AL-185
CLP 1		AL 172
GLF-1	90-Well ELIJA	AL-17Z
GI P-7	96-Well FLISA	ΔΙ_174
		41 120
Oxyntomodulin	96-Well ELISA	AL-139

\*Unless otherwise stated here, in our catalog, or other product documentation, these kits are intended for research use only and not for in vitro diagnostic purposes or therapeutic uses.

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#### Reproductive Function

Activin A [CE] Activin B Activin AB AFP AMH [CE] AMH, Dried Blood Spot [CE] AMH (PCOCheck<sup>™</sup>) [CE] picoAMH (MenoCheck®) [FDA, CE] BMP-15 Estriol [FDA, CE] Follistatin Follistatin Like-3 FSH FSH, Dried Blood Spot GDF-9 GDF-9/BMP-15 Complex GDF-15, Total GDF-15, H-Specific Inhibin, Total Inhibin A [FDA, CE] picolnhibin A Inhibin A (OMQCheck<sup>™</sup>) Inhibin B [CE] Inhibin B, Ultra-Sensitive [CE] LH LH, Dried Blood Spot PAPP-A [CE] PAPP-A2 [CE] picoPAPP-A [CE] PLGF [CE] Prolactin [FDA, CE] Prolactin, Dried Blood Spot [CE]

### Specialty Controls

AnshCheck AMH Tri-Level Controls [FDA, CE]

- AnshCheck Inhibin B Tri-Level Controls
- AnshCheck Maternal Screening Bi-Level Controls [FDA, CE]

\*\*Unless stated otherwise, products are for research use only.

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Ansh Labs is ISO certified for the sign, development, manufacturing, services and distribution of reagents/ immunoassav kits for research and in vitro diagnostic applications.

Metabolism

C-Peptide of Insulin GIP, Intact GIP, Total Glicentin GLP-1 GLP-2 Glucagon [FDA, CE] Major Proglucagon Fragment Oxyntomodulin Proglucagon

### Growth Factors

IGF-I, Free IGF-I, Total [FDA, CE] IGF-II IGFBP-2 IGFBP-3, Intact IGFBP-3, Total IGFBP-4, Intact IGFBP-4, Total IGFBP-5 picolL-6 Stanniocalcin 2

#### Species Specific Assays

Activin B: Mouse, Rat

AMH: Bovine, Canine, Equine, Feline, Mouse, Ovine, Porcine, Primate, Rat

GDF-15: Bovine

IGF-I, Free: Mouse, Rat

IGF-I, Total: Mouse, Rat

IGFBP-4, Intact: Mouse, Rat IGFBP-4, Total: Mouse, Rat

Inhibin A: Canine, Equine, Rodent

Inhibin B: Canine, Equine, Mouse

Oxyntomodulin: Mouse, Rat PAPP-A: Mouse

Neuronal Disorders MBP