

# C-Peptide of Insulin

Enzyme-Linked Immunoassay Kit



**Introduction:** 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

### Accurate

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
1	1.4560	1.928	2.001	104
		2.400	2.499	104
		2.873	3.016	105
2	0.9130	1.412	1.510	107
		1.912	2.049	107
		2.411	2.621	109
3	0.7750	1.281	1.360	106
		1.788	1.951	109
		2.294	2.460	107
4	0.1790	0.715	0.847	118
		1.251	1.433	115
		1.787	1.955	109

### Specific

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.

#### 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

#### Kit 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.

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
GLP-1	96-Well ELISA	AL-172
GLP-2	96-Well ELISA	AL-174
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.

POS.151.1222.USINTL

### Reproductive Function

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

### Specialty Controls

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

### Metabolism

C-Peptide of Insulin  
Glicentin  
GLP-1  
GLP-2  
Glucagon [FDA, CE]  
Major Proglucagon Fragment (MPGF)  
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  
AMH - Bovine, Canine, Equine, Mouse, Ovine, Porcine, Rat  
IGF-I, Free - Mouse, Rat  
IGF-I, Total - Mouse, Rat  
Inhibin A - Canine, Equine, Rodent  
Inhibin B - Canine, Equine, Rodent  
Oxyntomodulin - Mouse, Rat  
PAPP-A - Mouse

### Neuronal Disorders

MBP

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

### Customer Relations

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