

GIP (Total and Intact)

Enzyme-Linked Immunoassay Kit



Introduction: Gastric Inhibitory Polypeptide (GIP) is an incretin hormone produced in the upper gut and secreted to the circulation in response to the ingestion of foods, especially fatty foods¹. It is a peptide hormone consisting of 42 amino acids and derives from posttranslational processing of pre-pro-GIP, a protein consisting of 153 amino acids. It is structurally similar to members of the secretin/glucagon family that include secretin, glucagon, vasoactive intestinal peptide, and growth hormone-releasing factor². Growing evidence supports the physiological and pharmacological relevance of GIP in development of obesity and the pathogenesis of cardiovascular disease in addition to its involvement in type 2 diabetic pathophysiology^{1,3}. GIP acts in the entero-insular axis as an anabolic hormone that increases insulin levels, which in return increases the glycogen and fatty acid synthesis and inhibits the breakdown of fat. GIP also has extra pancreatic functions as well as roles in the stomach to reduce acid secretion by the parietal cells. On the bone, GIP has a dual effect as it causes proliferation of osteoblasts as well as inhibits osteoclastic bone resorption. The widespread expression of GIP-R in the brain suggests that GIP might play an essential function in neuro-signaling mechanisms².

References:

1. <https://doi.org/10.2337/dbi21-0001>
2. <https://www.ncbi.nlm.nih.gov/books/NBK546653/>
3. <https://doi.org/10.1016/j.peptides.2019.170174>

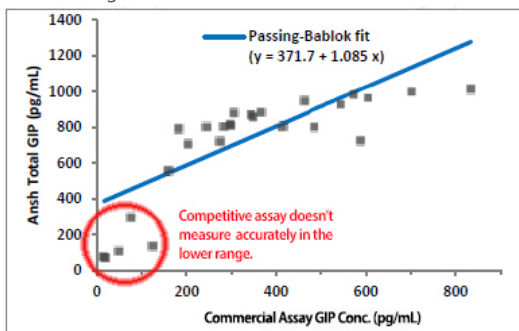
ANSH LABS ADVANTAGES

Accurate Measurement

The distinction between Intact GIP and Total GIP is important in research and clinical contexts. While Intact GIP is the biologically active form responsible for the incretin effect and insulin release, Total GIP gives a more comprehensive picture of the Total GIP levels, including any breakdown products such as GIP (1-30) that may also have biological activity or relevance.

Method Comparison

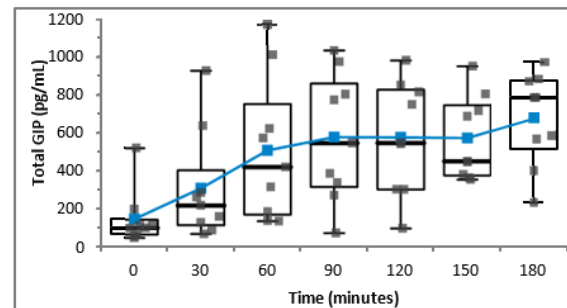
The Ansh Labs Total GIP ELISA (AL-1013) has been compared to commercial Total GIP ELISA. Passing Bablok analysis of the results yielded the following:



Expected Values

Total GIP

Total GIP concentrations were measured in human plasma samples, fasting (0 minutes) and between 30-180 minutes after meals at 30 minutes intervals. The change in Total GIP concentration with time after meal was analyzed and is presented below.



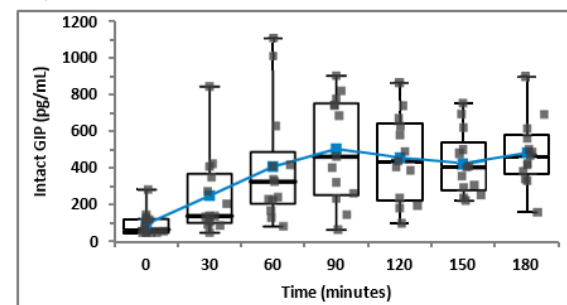
Specificity

The monoclonal antibody pair used in the assay detects GIP and does not cross-react to other closely related analytes.

Cross-Reactant	Concentration	Total GIP % Cross-reactivity	Intact GIP % Cross-reactivity
GIP (1-30)	5 ng/mL	47.6%	Non-Detectable
GIP (1-42)	5 ng/mL	100%	100%
GIP (3-42)	5 ng/mL	100%	100%
OXM, GCG, GLP-1 (7-36), GLP-1 (9-36), GLP-2 (1-34), GRPP, MPGF-1, MPGF-2, Insulin, C-Peptide	10 to 1000 ng/mL	Non-Detectable	Non-Detectable

Intact GIP

Intact GIP concentrations were measured in human plasma samples, fasting (0 minutes) and between 30-180 minutes after meals at 30 minutes intervals. The change in Intact GIP concentration with time after meal was analyzed and is presented below.



GIP (Total and Intact)

Product Listing

GIP is a useful research tool for studies related to:

- Diabetes
- Obesity
- Cardiovascular Disease
- Bone formation and resorption
- Neuro-signaling mechanisms

ELISA 96 Wells

GIP (Total)

Catalog Number	AL-1013
Method	Quantitative 2-step sandwich type immunoassay
Incubation Time	Total 3.5 hour incubation at room temperature
Approximate Dynamic Range	32-1000 pg/mL
Analytical Sensitivity	8.0 pg/mL
Sample Size / Type	25 µL / Serum, Plasma
Shelf-life	24 months
Species Reactivity	Serum from Human, Goat, Bovine, Canine (and testicular extract), Equine (and cyst fluid), Feline, Ovine, Porcine, and Squirrel Monkey.

GIP (Intact)

Catalog Number	AL-1022
Method	Quantitative 2-step sandwich type immunoassay
Incubation Time	Total 3.5 hour incubation at room temperature
Approximate Dynamic Range	32-1000 pg/mL
Analytical Sensitivity	7.7 pg/mL
Sample Size / Type	25 µL / Serum, Plasma
Shelf-life	24 months
Species Reactivity	Serum from Human, Goat, Canine (and testicular extract), Equine (and cyst fluid), and Vervet Monkey.

Related Assays

Glucagon	96-Well ELISA	AL-157 [FDA]
GLP-1	96-Well ELISA	AL-172
GLP-2	96-Well ELISA	AL-174
Proglucagon	96-Well ELISA	AL-1019
Glicentin	96-Well ELISA	AL-185
C-Peptide of Insulin	96-Well ELISA	AL-151
Oxyntomodulin	96-Well ELISA	AL-139
Major Proglucagon Fragment	96-Well ELISA	AL-175
Rat / Mouse Oxyntomodulin	96-Well ELISA	AL-192

*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.1022.1013.0324.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]
 piconinhibin 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
 GIP, Intact
 GIP, Total
 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 [CE]
 IGFBP-4: 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

281.404.0260, Ext. 263
 sales@anshlabs.com

445 Medical Center Blvd.
 Webster, Texas 77598 USA



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ISO 13485:2016

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