

Glucagon-like Peptide-2 (GLP-2)

Enzyme-Linked Immunoassay Kit



Introduction: Glucagon-Like Peptide-2 (GLP-2) is a 33-amino acid gut hormone produced by the intestinal L-cells and various neurons in the central nervous system¹⁻³. Posttranslational proteolytic cleavage of proglucagon molecule produces GLP-2 along with GLP-1. Intestinal GLP-2 is co-secreted along with GLP-1 upon nutrient ingestion. GLP-2 is released in response to stimulation by luminal nutrients, such as glucose, fatty acids and dietary fiber⁴. GLP-2 is cleaved by proteolytic enzymes into active form (1-33) and inactive form (3-33). The GLP-2 sequence is highly conserved among mammals and is involved in regulating gut mucosal growth and integrity. The main biological actions of GLP-2 are related to the regulation of energy absorption and maintenance of mucosal morphology, function and integrity of the intestine; however, recent experimental animal studies suggested that GLP-2 exerts beneficial effects on glucose metabolism in conditions related to increased uptake of energy, such as obesity. GLP-2 acts in an endocrine fashion to link intestinal growth and metabolism with nutrient intake⁴. GLP-2 acts as a beneficial factor for glucose metabolism in mice with high-fat diet-induced obesity⁵. GLP-2 and related analogs may be used as therapeutics for short bowel syndrome, Crohn's disease, osteoporosis and as adjuvant therapy during cancer chemotherapy. Measuring plasma levels of GLP-2 in research, preclinical and clinical studies of Type 2 Diabetes and obesity will open new avenue for diagnostics and therapeutics.

(Please see the GLP-2 page on our website for references)

ANSH LABS ADVANTAGES

Accurate

Human EDTA plasma samples and calibrator F containing various GLP-2 levels were diluted with Calibrator A/sample diluent.

Sample	Dilution Factor	Expected Conc. (ng/mL)	Observed Conc. (ng/mL)	% Recovery
1	Neat	1.571	NA	NA
	1:2	0.789	0.874	111
	1:4	0.393	0.423	108
2	Neat	4.406	NA	NA
	1:2	2.203	1.962	89
	1:4	1.102	0.940	85
Calibrator F	Neat	7.500	NA	NA
	1:2	3.750	4.022	107
	1:4	1.875	1.880	100
	1:8	0.938	0.922	98
	1:16	0.469	0.479	102

Specific

The GLP-2 sequence is highly conserved among mammals. Antibody pair used in the assay detects human GLP-2 and cross-reactivity to other closely related analytes is listed.

Analytical measurable range of approximately 0.057-2.6 ng/mL
Wide dynamic range for detection of GLP-2 studies of a variety of physiological states.

Sensitive to 0.003 ng/mL

Long shelf-life

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

Specificity

Sample No.	Cross-reactant	Concentration (ng/mL)	% Cross-reactivity
1	Oxyntomodulin	100	ND
2	Glucagon (1-29)	100	ND
3	GLP-1 (1-36, 7-36, 9-36)	100	ND
4	GRP9, Glicentin	100	ND
5	MPGF-1	10	2.4%
6	MPGF-2	10	ND
7	GLP-2 (1-34)	15	24%
8	GLP-2 (3-34)	1.1	186%
9	GLP-2 (1-18)	110	ND
10	GLP-2 (19-34)	110	ND
11	GLP-2 (3-18)	110	ND
12	Teduglutide	1.47	102%
13	Insulin, C-Peptide, Tg	10	ND

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Product Listing

GLP-2 is a useful research tool for studies related to:

- Diabetes
- Obesity
- DPP4 inhibitors
- Short bowel syndrome
- Inflammatory bowel disease
- Insulin sensitivity and resistance
- Intestinal blood flow and permeability
- Glucose homeostasis via CNS

ELISA 96 Wells

Method	Quantitative 3-step sandwich type immunoassay
Incubation Time	Total 2.5 hour incubation at room temperature
Approximate Dynamic Range	6 points, 0.057-2.6 ng/mL
Sensitivity	0.003 ng/mL
Sample Size / Type	50 µL / Human K2EDTA Plasma (non-extraction)
Shelf-life	24 months
Catalog Number	AL-174

Related Assays

GLP-1	96-Well ELISA	AL-172
Glicentin	96-Well ELISA	AL-185
Glucagon	96-Well ELISA	AL-157 [FDA,CE]
Oxyntomodulin	96-Well ELISA	AL-139
C-Peptide of Insulin	96-Well ELISA	AL-151
Proglucagon	96-Well ELISA	AL-1019

*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.174.1224.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
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]
picoInhibin A
Inhibin A (OMQCheck™)
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]

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
picoIL-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

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

Customer Relations
281.404.0260, Ext. 263
sales@anshlab.com

445 Medical Center Blvd.
Webster, Texas 77598 USA

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Call us today, or visit us at [AnshLabs.com](https://www.anshlab.com)

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ISO 13485:2016

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