

# IGFBP-2

Enzyme-Linked Immunoassay Kit



**Introduction:** IGFBP-2 is an unglycosylated polypeptide of 31.3 kDa and is one of the six circulating proteins that bind insulin-like growth factor (IGF)-I and -II with high affinity. It is also a widely expressed protein with functions in bone and skeletal muscle development, and regulation of body growth and composition. IGFBP-2 levels in circulation are influenced under different metabolism and malignant states. Compared to normal adults, IGFBP-2 levels are elevated in hypopituitary adults suggesting regulation by growth hormone. Extreme physical exercise results in elevated serum IGFBP-2 levels in men and women.

Circulating IGFBP-2 levels are high in anorexia nervosa patients and suppressed in obesity and Type 2 Diabetes. Overexpression of IGFBP-2 protects against obesity and diabetes by inhibiting adipogenesis and modulating insulin sensitivity. In contrast to Type 2 Diabetes, IGFBP-2 levels are increased in Type 1 Diabetes suggesting regulation by insulin sensitivity.

IGFBP-2 levels are also altered in intra-uterine growth retardation (IUGR) and small for gestational age (SGA) cases. In IUGR, cord serum levels of IGFBP-2 are elevated and levels are low in pre-pubertal and pubertal SGA subjects. IGFBP-2, role in cancer progression is indicated by elevated levels in several malignancies like prostate, ovarian, breast and gastric cancer.

## ANSH LABS ADVANTAGES

### Accurate

Known amounts of IGFBP-2 were added to four serum samples containing different levels of endogenous IGFBP-2. The concentration of IGFBP-2 was determined before and after the addition of exogenous IGFBP-2 and the percent recovery was calculated.

Sample Name	% Cross-reactivity
Rat IGF-I	ND
IGF-I/IGFBP-3 Complex	ND
IGF-II	ND
Human IGF-II	ND
IGFBP-3	ND
IGFBP-4	ND
IGFBP-5	ND

### Specific

The IGFBP-2 antibody pair detects human, canine, bovine, equine, caprine, ovine, porcine, mouse, rat and vervet monkeys.

#### Specific to IGFBP-2

Does not show any cross-reactivity to IGF-I, IGF-II, IGFBP-3, IGFBP-4, or IGFBP-5.

#### Analytical measurable range of approximately 0.45-27.5 ng/mL

Wide dynamic range for detection of IGFBP-2 in a variety of physiological states.

#### Sensitive to 0.08 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

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

Sample	Endogenous Conc. (ng/mL)	Expected Conc. (ng/mL)	Observed Conc. (ng/mL)	% Recovery
1	1.30	3.67	3.59	98
		2.88	2.75	95
		2.25	2.28	102
2	0.80	3.43	3.51	102
		2.55	2.64	104
		1.85	1.85	100
3	1.30	8.87	8.69	98
		6.35	5.80	91
		4.33	3.89	90
4	1.80	8.63	8.06	93
		6.02	5.66	94
		3.93	3.75	95

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## Product Listing

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

- Various cancers
- Anorexia nervosa
- Obesity and T2DM
- Intra-uterine growth retardation
- Bone and skeletal muscle development
- Regulation of body growth and composition

## 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, 0.45- ng/mL
Sensitivity	0.08 ng/mL
Sample Size / Type	10 µL / Serum
Shelf-life	18 months
Catalog Number	AL-140
Species Reactivity	Human, Bovine, Canine, Equine, Feline, Mouse, Ovine, Porcine, Rat, Vervet Monkey

## Related Assays

GLP-1	96-Well ELISA	AL-172
GLP-2	96-Well ELISA	AL-174
Proglucagon	96-Well ELISA	AL-1019
Glucagon	96-Well ELISA	AL-157 [FDA, CE]
C-Peptide of Insulin	96-Well ELISA	AL-151
Oxyntomodulin	96-Well ELISA	AL-139
IGF-I	96-Well ELISA	AL-121 [FDA, CE]
IGF-II	96-Well ELISA	AL-131
IGFBP-3	96-Well ELISA	AL-120
IGFBP-4	96-Well ELISA	AL-126
IGFBP-5	96-Well ELISA	AL-127

\*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.140.1224.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

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ISO 13485:2016

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