

### LVV Hemorphin 7 ELISA kit ab136942

2 Images

#### Overview

**Product name** LVV Hemorphin 7 ELISA kit

**Detection method** Colorimetric

**Precision**

Intra-assay

Sample	n	Mean	SD	CV%
LVV Hem 7	20	708.1pg/ml		4.1%
LVV Hem 7	20	305.5pg/ml		8.8%
LVV Hem 7	20	71.5pg/ml		20.9%

Inter-assay

Sample	n	Mean	SD	CV%
LVV Hem 7		707pg/ml		9.2%
LVV Hem 7		334.1pg/ml		9.5%
LVV Hem 7		72.3pg/ml		16.5%

**Sample type** Serum, Tissue Extracts

**Assay type** Competitive

**Sensitivity** 6.1 pg/ml

**Range** 9.8 pg/ml - 10000 pg/ml

**Recovery**

Sample specific recovery

Sample type	Average %	Range
Serum	= 94	100ng/ml - 5000ng/ml
Tissue Extracts	= 95	100ng/ml - 5000ng/ml

**Assay time** 3h 0m

**Assay duration**

Multiple steps standard assay

**Species reactivity****Reacts with:** Rat, Human**Product overview**

Abcam's LVV Hemorphin 7 *in vitro* competitive ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the accurate quantitative measurement of LVV Hemorphin 7 in serum and tissue homogenates. This kit is not intended for use with plasma samples.

A polyclonal anti-Rabbit-IgG antibody has been precoated onto 96-well plates. Standards or test samples are added to the wells, along with a solution of LVV Hemorphin 7 conjugated to biotin, followed by a solution of polyclonal antibody to LVV Hemorphin 7. The plate is washed to remove unbound reagents. A solution of streptavidin-HRP conjugate is then added. After further incubation the excess reagents are washed away and TMB substrate is added, which is catalyzed by HRP to generate a yellow color. A stop solution changes this color from yellow to blue, and the intensity of this blue coloration is inversely proportional to the amount of LVV Hemorphin 7 captured in the plate.

**Notes**

Analyte	Sequence	Percent cross reactivities in the range of 0.1 pM - 500 nM
LVV Hemorphin 7	LVVYPWTQRF	100
Leu-Valorphin-Arg (LVV Hemorphin-6)	VVYPWTQR	<0.003
Valorphin	VVYPWTQ	<0.003
Ang(1-12)	DRVYIHPFHLVI	<0.003
Ang I	DRVYIHPFHL	<0.003
Ang(1-9)	DRVYIHPFH	<0.003
Ang II	DRVYIHPF	<0.003
Ang(1-7)	DRVYIHP	<0.003
Ang A	ARVYIHPF	<0.003
Ang III	RVYIHPF	<0.003
Ang IV	VYIHPF	<0.003

**Platform**

Microplate

**Properties****Storage instructions**

Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer Concentrate	1 x 27ml

Components	1 x 96 tests
Assay Buffer 16	1 x 30ml
Goat anti-rabbit IgG Microplate (12 x 8 wells)	1 x 96 tests
HRP- Streptavidin Conjugate	1 x 12.5µg
LVV Hemorphin 7 Antibody	1 x 6ml
LVV Hemorphin 7 Conjugate	1 x 6ml
LVV Hemorphin 7 Standard	2 x 40ng
Plate Sealer	2 units
Stop Solution 2	1 x 10ml
TMB Substrate	2 x 10ml

### Function

Involved in oxygen transport from the lung to the various peripheral tissues.  
 LVV-hemorphin-7 potentiates the activity of bradykinin, causing a decrease in blood pressure.  
 Spinorphin: functions as an endogenous inhibitor of enkephalin-degrading enzymes such as DPP3, and as a selective antagonist of the P2RX3 receptor which is involved in pain signaling, these properties implicate it as a regulator of pain and inflammation.

### Tissue specificity

Red blood cells.

### Involvement in disease

Heinz body anemias  
 Beta-thalassemia  
 Sickle cell anemia  
 Beta-thalassemia, dominant, inclusion body type

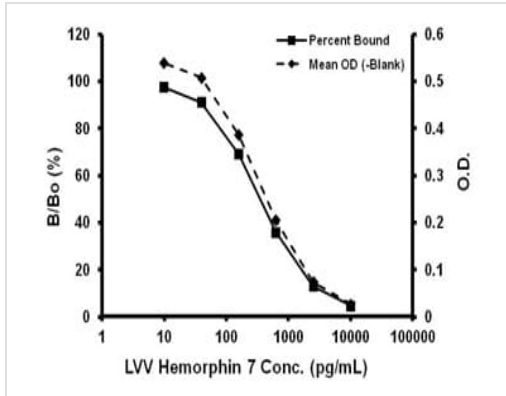
### Sequence similarities

Belongs to the globin family.

### Post-translational modifications

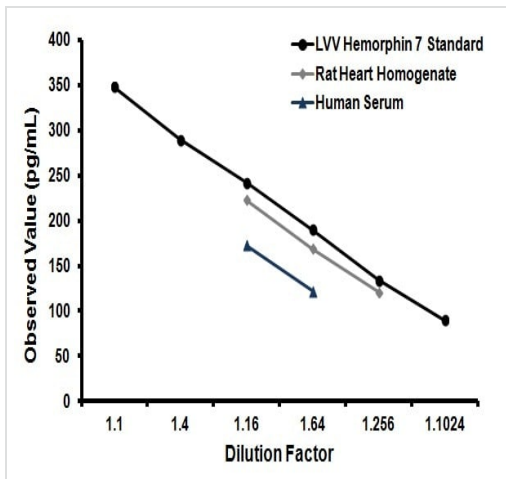
Glucose reacts non-enzymatically with the N-terminus of the beta chain to form a stable ketoamine linkage. This takes place slowly and continuously throughout the 120-day life span of the red blood cell. The rate of glycation is increased in patients with diabetes mellitus.  
 S-nitrosylated; a nitric oxide group is first bound to Fe(2+) and then transferred to Cys-94 to allow capture of O(2).  
 Acetylated on Lys-60, Lys-83 and Lys-145 upon aspirin exposure. PubMed:16916647 reports the identification of HBB acetylated on Lys-145 in the cytosolic fraction of HeLa cells. This may have resulted from contamination of the sample.

### Images



Representative Standard Curve using ab136942.

Typical Standard Curve



Dose response curves from human plasma and serum diluted into assay buffer were compared to the LVV Hemorphin 7 standard curve. The parallel response indicates the standard effectively mimics the native protein.

Typical Parallelism Graph

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