

Hycult biotechnology

Human L-Ficolin ELISA Kit

Catalog No. HK336

Quantity : 2 x 96 determinations

Description Ficolins are a group of proteins containing both a collagen-like domain and a fibrinogen-like domain. Three forms of ficolins have been identified in humans: L-Ficolin, M-Ficolin and H-Ficolin. L-Ficolin is produced primarily by the liver. Whereas H-ficolin is produced by the liver and the lung and M-Ficolin by monocytes, leukocytes and lung cells. L-Ficolin recognizes distinct danger-associated molecular patterns (DAMPs) like GlcNAcstructures in Lipoteichoic Acid (LTA) and fungal 1,3- β -D-glucan. L-Ficolin also recognizes N-acetylated compounds such as acetylcholine. Furthermore, L-Ficolin recognizes apoptotic cells and participates in the removal of host cells. L-Ficolin circulates in complex with MASP-2 and can activate the lectin complement pathway. L-Ficolin serum levels are reported with varying concentrations. Polymorphisms in the promoter of the FCN2 gene from which L-Ficolin is derived are associated with variation in L-Ficolin serum levels. These polymorphisms may influence the affinity of L-Ficolin to GlcNAcstructures.

L-Ficolin deficiencies have not been reported, but low L-Ficolin serum levels have been associated with recurrent respiratory infections in children. Interestingly, L-Ficolin has been implicated in the unique immune challenge during pregnancy. In maternal plasma of normal pregnancies, a 4- to 5-fold increase in L-Ficolin was detected compared to healthy non-pregnant persons. However, significantly lower L-Ficolin maternal plasma concentrations were associated with pre-eclamptic pregnancies. Therefore, assessment of L-Ficolin is warranted to study its regulatory role in the innate immune system. Normal human plasma contains a L-Ficolin concentration ranging from 1 to 14 μ g/ml.

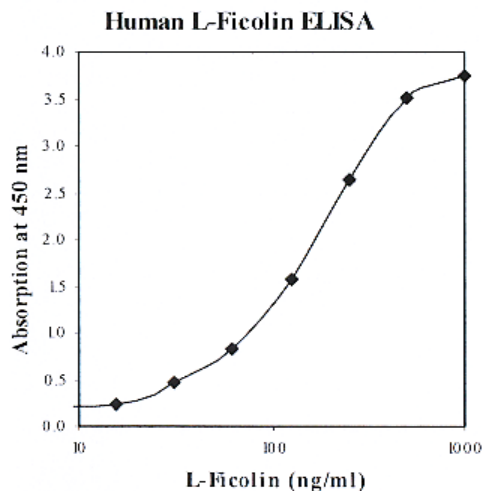
Aliases P35, Ficolin L, Ficolin-2, EBP-37, hucolin

Application The human L-Ficolin ELISA has been developed for the quantitative measurement of natural L-Ficolin in plasma and serum. In plasma samples, L-Ficolin can be measured accurately if samples are diluted at least 10 times. Most reliable results are obtained if EDTA plasma is used.

Features

- Minimum concentration which can be measured is 16 ng/ml human L-Ficolin.
- Measurable concentration range of 16-1000 ng/ml.
- Working volume of 100 μ l/well.

Typical standard curve



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Principle

- The human L-Ficolin ELISA is a ready-to-use solid-phase enzyme-linked immunosorbent assay based on the sandwich principle with a working time of 3½ hours.
- The efficient format of 2 plates with twelve disposable 8-well strips allows free choice of batch size for the assay.
- Samples and standards are captured by a solid bound specific antibody.
- Biotinylated tracer antibody will bind to captured L-Ficolin.
- Streptavidin-peroxidase conjugate will bind to the biotinylated tracer antibody.
- Streptavidin-peroxidase conjugate will react with the substrate, tetramethylbenzidine (TMB).
- The enzyme reaction is stopped by the addition of citric acid.
- The absorbance at 450 nm is measured with a spectrophotometer. A standard curve is obtained by plotting the absorbance (linear) versus the corresponding concentrations of the L-Ficolin standards (log).
- The human L-Ficolin concentration of samples, which are run concurrently with the standards, can be determined from the standard curve.

Storage and stability

Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least six months. After reconstitution the reagents are stable for 1 month if stored at 2-8°C except for the standard. After reconstitution, we recommend to store the standard in aliquots at -20°C.

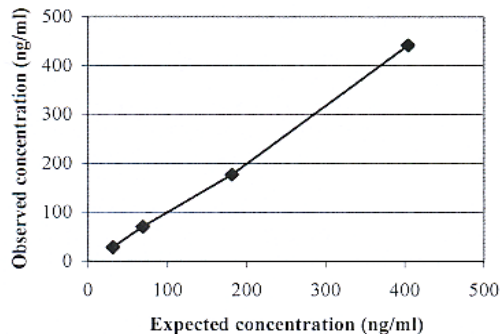
Recovery

Normal human blood samples (plasma), containing baseline levels of 500 ng/ml were spiked with recombinant L-Ficolin in concentrations of 20 and 200 ng/ml. Samples with and without L-Ficolin were incubated for 1 hour at 37 °C. Samples were measured using the ELISA. Recovery values for L-Ficolin ranged between 100 % and 110%.

Linearity

The linearity of the assay was determined by serially diluting a sample containing 6903 ng/ml human L-Ficolin. The diluted samples were measured in the assay. The line obtained a slope of 1.11 and a correlation coefficient of 0.998.

Linearity



Precautions

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hbt is not responsible for any patent infringements that might result with the use of or derivation of this product.

References

1. Atkinson, A et al; L-Ficolin in children with recurrent respiratory infections. Clin Exp Immunol 2004, 138:517

Also available

HK340	Human H-Ficolin ELISA Kit, 2 x 96 determinations
HK322	Human MBL ELISA Kit, 2 x 96 determinations
HK326	Human MASP-2 ELISA Kit, 2 x 96 determinations
HK327	Human functional MBL/MASP-2 ELISA Kit, 2 x 96 determinations
HK328	Human TCC ELISA Kit, 2 x 96 determinations

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