

TURBOVET BOVINE ITIH4



Turbidimetric method for ITIH4 quantification in bovine serum samples

In cattle ITIH4 belongs to the group of acute phase proteins (APP), i.e. blood proteins that increase in concentration in response to inflammation, injuries, infection or stress. APP are very sensitive biomarkers of inflammation and can be used in the assessment of animal health and welfare. APP are useful to detect inflammatory or infectious diseases (including subclinical conditions) and to monitor the evolution of the disease and the response to treatments. The sensitivity of detection can be increased by the use of a combination of APP including a fast and protracted responders, such as that formed (in bovine) by Hp and ITIH4.

Features

- **Automated:** easy to program on a variety of clinical chemistry analyzers
- **Wide analytical range without pre-dilution** of the sample.
- **Excellent precision and accuracy.** Good correlation with ELISA.
- **Species-specific:** antibodies and calibrators specific for bovine.

Analytical principle

In the reaction media ITIH4 from serum reacts with anti-ITIH4 antibodies to form immunocomplexes. The insoluble aggregates formed originate an increase of turbidity, which is determined by a measurement of absorbance. The increase of turbidity is proportional to ITIH4 concentration in the sample.

Type of assay	Turbidimetric immunoassay, 340 nm reading
Format	2 liquid reagents, ready to use
Standard	Acuvet Biotech Internal Standard (bovine specific). No international Standard available.
Range	0 - 4 mg/mL
Security range (prozone)	> 9 mg/mL
Interferences	No interferences by hemoglobin (20 g/L) bilirubin (0.15 g/L) and triglycerides < 10 g/L (intralipid)

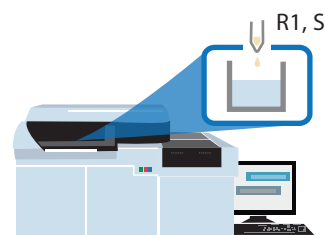
Precision*		
Concentration (mg/mL)	Within-run CV(%)	Between-day CV(%)
0.45	2.3	3.1
2.40	2.1	5.1

*20 days study in an Olympus AU400 analyzer. Every day samples were analyzed in duplicates, in two runs.

Assay procedure*

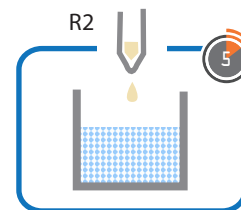
- 1 Add buffer (R1, 260 μ L)
Add sample (S, 2 μ L)
1st reading (M1)

M1: Abs 340nm



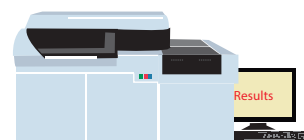
- 2 Add antibody (R2, 40 μ L)
Incubate 5 min
2nd reading (M2)

M2: Abs 340nm



- 3 Results

M2-M1 \rightarrow C



*Recommended procedure. Volume and time may be adjusted according to the analyzer features