

Purity check

Serazym[®] Bovine Serum Albumin (E-048)

Enzyme-linked immunosorbent assay for detection of bovine serum albumin in biological fluids

- ▲ short incubation times
- ▲ ready-to-use standards and control
- ▲ quantitative results (ng/ml)

Introduction

The Serazym[®] Bovine Serum Albumin ELISA enables the fast and sensitive quantification of bovine serum albumin (BSA) in vaccines and other biological fluids.

Principle of the test

The Serazym[®] Bovine Serum Albumin ELISA is a direct sandwich enzyme immunoassay using immobilized polyclonal antibodies against BSA and horseradish peroxidase (HRP) labelled anti-BSA antibodies as detection system.

Test components

- 96-well microtitration plate
- 50 ml wash buffer, 10fold concentrated
- 70 ml sample diluent
- 6 x 1.0 ml BSA standards, ready to use
- 1.0 ml BSA control sample, ready to use
- 0.3 ml HRP-conjugate, 101fold concentrated
- 15 ml TMB-/substrate solution, ready to use
- 15 ml stop solution, ready to use

Attention: The Serazym[®] Bovine Serum Albumin ELISA is a very sensitive assay. It is recommended to use disposable reagent containers for pipetting the components. Make sure that the glassware and plastic material used for buffer preparation and reagent handling are absolutely free of BSA.

Test procedure

- add 100 µl of the diluted samples and of the ready to use standards and the control into the intended wells
- incubate 60 min at 20...25 °C
- wash wells 5 x
- add 100 µl of diluted HRP-conjugate to every well
- incubate 60 min at 20...25 °C
- wash wells 5 x
- add 100 µl of TMB-/substrate solution to every well
- incubate 15 min at 20...25 °C protected from light
- add 100 µl of stop solution to every well
- read absorbances at 450/620 nm

Quantification

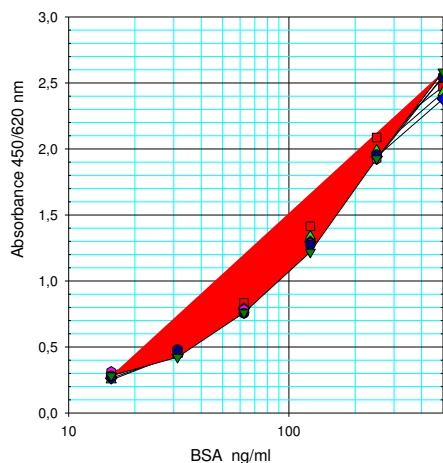
Create a standard curve using the absorbances of the standards with BSA concentrations in the range from 15 ng/ml to 500 ng/ml.

Determine the BSA concentrations of the samples by referring their absorbances to the corresponding concentrations of the standard curve.

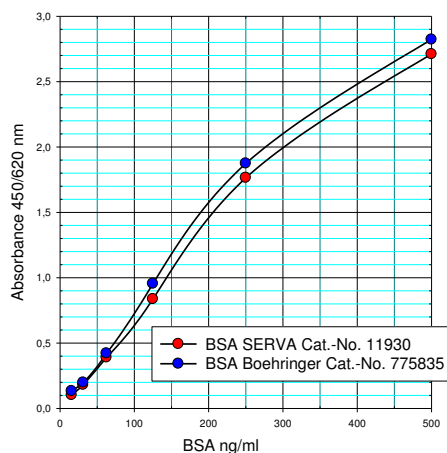
Test validity

Standard S 1	absorbance	≥ 1.50
Standard S 6	absorbance	≤ 0.50
Control sample		150 - 250 ng/ml

Typical standard curves



Comparison of different BSA Lots



Precision

Intra-assay coefficient of variation (n = 8)

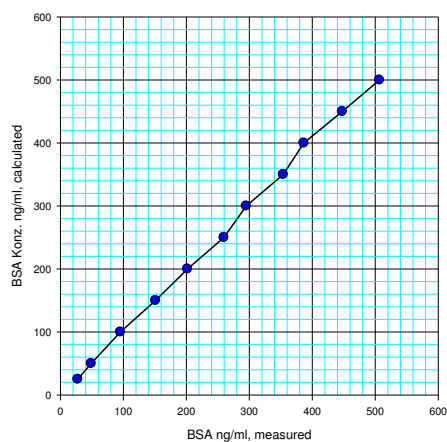
Mean absorbance	Standard deviation	Coefficient of variation [%]
2.594	0.06	2.3
2.179	0.06	2.9
1.556	0.06	3.6
1.226	0.04	3.1
0.744	0.05	6.8
0.358	0.02	5.5

BSA concentration [ng/ml]	Standard deviation	Coefficient of variation [%]
499	46.2	9.3
291	21.9	7.5
123	6.8	5.6
101	4.7	4.7
50	4.6	9.2
25	2.5	9.9

Inter-assay coefficient of variation (n = 12)

BSA concentration [ng/ml]	Standard deviation	Coefficient of variation [%]
419	42.0	10.0
313	23.6	7.6
195	16.2	8.3
97	5.7	5.9
51	3.8	7.4
29	2.6	9.1

Linearity



Estimation of BSA in a cell culture medium sample (Episerf)

