InSight Equine-IA e IgG Evaluation
vs. IDEXX e IgG

The InSight Equine-IA is an easy to use Equine Immunoassay Analyser providing accurate and reliable results in 3-15 minutes. The InSight Equine-IA uses immunofluorescence technology for accurate results. A competitive binding assay is based upon the competition of labelled and unlabelled analytes for a limited number of antibody binding sites. Unbound antibodies and immunocomplexes migrate alongthe nitrocellulose membrane towards the test line. The unbound antibodies are then captured by antigens immobilised on the test line. The fluorescent signal intensity reflects the amount of analytes captured and is measured by the InSight Equine-IA.

e IgG

Immunoglobulin G (IgG) is an antibody that identifies and destroys foreign bacteria and viruses as part of the immune system. In horses, antibodies are not transferred across the placenta from the mare to the foetus, so foals are born without IgG in their blood. Foals receive antibodies and acquire immunity within first 24-36 hours of life via passive transfer when foal nurses on mare's colostrum and antibodies are absorbed across small intestine cells into blood. A serum IgG concentration of >800 mg/dL is considered adequate passive transfer. Failure of passive transfer in foals is associated with increased risk of infection and death.

Comparison Items

InSight Equine-IA:
Test Item – e IgG
Sample Type – Fresh Foal Serum
Quantity of Samples – 45 Tests

IDEXX:
Test Item – e IgG
Sample Type – Fresh Foal Serum
Quantity of Samples – 45 Tests

Results

e IgG		IDEXX		
		Positive	Negative	Total
InSight Equine-IA	Positive	34	0	34
	Negative	2	9	11
	Total	36	9	45

Positive Coincidence Rate	94%
Negative Coincidence Rate	100%
Total Coincidence Rate	96%

Sample	InSight Equine-IA (mg/dL)	IDEXX (mg/dL)
1	934.67	>800
2	1297.72	>800
3	1080.44	>800
4	1503.32	>800
5	1102.65	>800
6	1206.69	>800

7	364.11	<400
8	1131.45	>800
9	817.94	>800
10	1007.36	>800
11	1725.04	>800
12	1679.2	>800
13	481.78	400-800
14	1345.75	>800
15	1403.51	>800
16	952.51	>800
17	819.63	400-800
18	384.51	<400
19	1176.29	>800
20	616.22	400-800
21	1205.77	>800
22	1019.45	>800
23	1346.03	>800
24	1286.67	>800
25	780.31	400-800
26	1835.54	>800
27	1818.64	>800
28	659	400-800
29	1233.56	>800
30	1263.5	>800
31	948.31	>800
32	892.1	400-800
33	961.61	>800
34	598.33	400-800
35	1195.13	>800
36	952.26	>800
37	1566.16	>800
38	686.32	400-800
39	633.45	400-800
40	2180.82	>800
41	1566.16	>800
42	1108.95	>800
43	1299.6	>800
44	818.64	>800
45	1680.76	>800

Sample Concentration	1	2	3	4	5	6	7	8	9	10	Mean Value	Bias%
300 mg/dL	295.86	286.86	287.16	303.12	287.02	295.15	294.91	294.01	287.37	299.49	293.1	-0.023
600 mg/dL	587.86	567.24	582.52	559.48	572.77	594.37	580.4	558.71	626.53	629.29	585.92	-0.023
1200 mg/dL	1182.3	1218.8	1193.6	1144.3	1217.1	1201.3	1156.6	1163	1140.5	1133.5	1175.1	-0.021

Conclusion

Based on comparative analysis, the total coincidence rate of InSight Equine-IA e IgG Rapid Quantitative Test Kit and IDEXX e IgG Semi-Quantitative SNAP Test Kit is as high as 95%, indicating that the InSight Equine-IA reagent is comparable to the IDEXX semi-quantitative reagent.