

## EXTERNAL REFERENCES

### ID SCREEN®BVD P80 ANTIBODY COMPETITION

Last update: November 2025

#### Publications / References:

#### BVD

#### PERFORMANCE EVALUATION

<p>1)Comin A. <i>et al.</i> (2025). <b>Inter-laboratory evaluation of serological tests using Bayesian latent class models: A case study for bovine viral diarrhoea.</b> Preventive Veterinary Medicine, 106659.</p>	<ul style="list-style-type: none"> <li>• 485 cattle sera collected from France, the Netherlands, Sweden and the United Kingdom (consortium Covetlab) were tested in the 4 Covetlab laboratories using 8 diagnostic tests, based on 6 different commercial ELISA kits (including the ID SCREEN®BVD P80 Antibody Competition, tested twice with short protocol and once with long protocol). Bayesian latent class models (BLCM) were applied to estimate test performance.</li> <li>• <b>Results:</b> <ul style="list-style-type: none"> <li>-out of 485 samples, 210 samples (43%) were negative in all 8 tests, and 230 samples (47%) were positive in all tests, indicating a high concordance between tests</li> <li>-BLCM results showed that most tests demonstrated high performance</li> <li>-sensitivity estimated for the ID SCREEN®BVD P80 Antibody Competition was                             <ul style="list-style-type: none"> <li>in both tests with short protocol:98.8%</li> <li>in test with long protocol: 98%</li> </ul> </li> <li>-specificity estimated for the ID SCREEN®BVD P80 Antibody Competition was                             <ul style="list-style-type: none"> <li>in test 1 with short protocol:99.1%</li> <li>in test 2 with short protocol: 99.5%</li> <li>in test with long protocol: 99.5%.</li> </ul> </li> </ul> </li> </ul>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Comparison with competitors</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Bayesian latent class models</p>
--	--	--	---

<p>2)Wernike K. and Beer M. (2022). <b>International proficiency trial for bovine viral diarrhea virus (BVDV) antibody detection: limitations of milk serology.</b> BMC Veterinary Research, 18(1), 1-11.</p>	<ul style="list-style-type: none"> <li>• A ring trial sample panel (<b>5 sera and 5 milk samples</b>) was investigated by nine commercially available antibody ELISAs (including the ID SCREEN®BVD P80 Antibody Competition) as well as by neutralization tests against diverse BVDV-1, BVDV-2 and/or border disease virus (BDV) strains.</li> <li>• <i>Results: The presented interlaboratory proficiency trial for serological BVD diagnostics revealed, dependent on the test system and incubation period, considerable differences in the number of correct evaluations for BVDV seropositive samples, most notably when considering the results obtained for pooled milk samples; <b>the best performance for pooled milk samples of all kits, which were used in more than one laboratory, was achieved by the ID Screen® BVD p80 Antibody Competition (and another ELISA test) performed using the long sample incubation protocol. (sic)</b></i></li> </ul>	Comparison with competitors	Correlation with other techniques	Matrix: serum and milk	
<p>3)Albrecht K. et al. (2021). <b>Re-introduction of bovine viral diarrhea virus in a disease-free region: impact on the affected cattle herd and diagnostic implications.</b> Pathogens, 10(3), 360.</p>	<ul style="list-style-type: none"> <li>• In this study, animals kept in a naturally re-infected herd were blood sampled seven weeks after the birth of the first persistent infected (PI) animal. The collected samples were examined serologically to investigate the capability of a <b>seroneutralisation test (SNT)</b> and 8 different commercial ELISA systems (including the ID SCREEN®BVD P80 Antibody Competition) for the early detection of a BVDV introduction into a naïve herd.</li> <li>• <i>Results: <b>in 9 of the 18 in-contact animals (50.0%), anti-BVDV antibodies were detected by the microneutralization test. However, when analyzed by different commercially available BVD antibody ELISAs, a high variation of the seropositivity rate was observed. While the ID SCREEN®BVD P80 Antibody Competition showed 100% accordance with the neutralization test, four of the other applied ELISAs only exhibited 83.3% conformity.</b> By using Svanovir BVDV Ab Screening, Svanovir BVDV Ab biphasisch, and Prio-CHECK® BVDV Ab, three sera scored negatively, although they had reacted positively in the neutralization test. IDEXX BVDV Ab total did not identify two sera as being positive in the neutralization test. In addition, one negative sample resulted in a doubtful measuring range of this ELISA. Only 72.2% accordance compared to the neutralization test was obtained by IDEXX BVDV p80Ab, which did not detect five out of nine sera with neutralizing antibodies. When employing Svanovir BVDV p80 AB and Serelisa BVD/MD AB Mono Blocking, only 61.1% of the sera were interpreted correctly. While Svanovir BVDV p80 AB did not detect seven out of nine antibody-positive sera, four sera produced false-negative results in Serelisa BVD/MD AB</i></li> </ul>	Comparison with competitors	Correlation with other techniques		Epidemiological study

	<p><i>Mono Blocking, and some of the SNT-negative samples were false-positives or doubtful.</i></p> <p><b><i>In this study, from 8 ELISA tests, only the ID SCREEN®BVD P80 Antibody Competition correctly detected all animals in which neutralizing anti-BVDV antibodies were detectable, while all other tests underestimated the seroprevalence, in some cases dramatically. (sic)</i></b></p>				
<p>4)Assunção S.F. <i>et al.</i> (2022). <b>Diagnosis and phylogenetic analysis of bovine viral diarrhea virus in cattle (<i>Bos taurus</i>) and buffaloes (<i>Bubalus bubalis</i>) from the Amazon region and Southeast Brazil.</b> Pesquisa Veterinária Brasileira, 42.</p>	<ul style="list-style-type: none"> <li>• Four different ELISA tests (including the ID SCREEN®BVD P80 Antibody Competition, named ELISA-4 in this study) were performed and confirmed by <b>virus neutralization testing (VNT)</b> to evaluate the occurrence of BVDV in <b>cattle</b> (n=77) and <b>buffaloes</b> (n=89). Extraction of viral RNA was performed from the serum or plasma samples for the detection of BVDV by RT-PCR analysis.</li> <li>• <i>Results:</i> in cattle, ELISA-1 detected 49.4% of seropositive animals, while the ID SCREEN®BVD P80 Antibody Competition detected 37.7%. In buffaloes, ELISA-1 (BVDV Total Ab Test IDEXX) failed to detect any seropositive animals, while ELISA-2 (BVDV p80 Ab IDEXX) and ELISA-3 (SERELISA BVD p80 Ab Mono Blocking SYNBIOTICS) detected 20.2% of seropositive animals, and the ID SCREEN®BVD P80 Antibody Competition detected 21.3%. The rate of PCR positive animals was 6.5% in cattle and 9% in buffaloes. Neutralization studies on seven randomly selected ID SCREEN®BVD P80 Antibody Competition buffalo positive samples with BVDV-1 showed that all these samples had BVDV-specific antibodies. In cattle, the ID SCREEN®BVD P80 Antibody Competition detected 37.7% positive animal with two doubtful results, both confirmed positive in VNT.</li> </ul> <p><b><i>From all the four ELISAs performed in buffalo samples, we conclude that the ID SCREEN®BVD P80 Antibody Competition was more reactive followed by SERELISA BVD p80 Ab Mono Blocking SYNBIOTICS, while BVDV Total Ab Test IDEXX is not efficient for diagnostic of BVDV seroprevalence in buffalo. (sic)</i></b></p>	<p>Comparison with competitors</p>	<p>Correlation with other techniques</p>	<p>Epidemiological study</p>	

## EPIDEMIOLOGICAL STUDIES

### CATTLE

#### SERUM

<p>5)Al-Mubarak A.I.A. <i>et al.</i> (2023). <b>A longitudinal study of bovine viral diarrhea virus in a semi-closed management dairy cattle herd, 2020–2022.</b> <i>Front. Vet. Sci.</i> 10 :1221883.</p>	<ul style="list-style-type: none"> <li>• Serological study monitored cattle sera (n=190) for 3 successive years using the ID SCREEN®BVD p80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was -year 1: 18.84% -year 2: 15% -year 3: 8.2%.</li> </ul>					
<p>6)Tandan P. <i>et al.</i> (2023). <b>Seroprevalence and Associated Risk Factors of Bovine Viral Diarrhea in the Dairy Cattle of Rupandehi District of Nepal.</b> <i>International Journal of Applied Sciences and Biotechnology</i>, 11(3), 128-134.</p>	<ul style="list-style-type: none"> <li>• 92 cattle sera were tested using the ID SCREEN®BVD p80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was 10.86%.</li> </ul>					
<p>7)Afify A.F. <i>et al.</i> (2022). <b>First detection of emerging HoBi-like Pestivirus (BVD-3) among some persistently infected dairy cattle herds in Egypt.</b> <i>Tropical Animal Health and Production</i>, 54(6), 336.</p>	<ul style="list-style-type: none"> <li>• 240 serum samples from dairy cattle herds were tested using the ID SCREEN®BVD p80 Antibody Competition and a commercial P80 antigen detection ELISA for detection of persistent infected (PI) animals, and then molecular characterization was performed.</li> <li>• <i>Results:</i> Six calves were found PI (negative for antibodies and positive for antigen) with a prevalence of 2.5% (6/240). Based on the phylogenetic analysis, all six samples were atypical HoBi-like Pestiviruses (BVD-3).</li> </ul>					
<p>8)Gautam A. <i>et al.</i> (2022). <b>Seroprevalence and its associated risk factors of Bovine Neosporosis and Bovine Viral Diarrhea in cattle of Tilottama municipality, Rupandehi, Nepal.</b> <i>Int J Vet Sci Res</i>, 8(3), 127-132.</p>	<ul style="list-style-type: none"> <li>• 92 serum samples were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> 3 samples were positive for BVD antibodies. The apparent prevalence was 3.26% with a true prevalence of 3.10% for BVD.</li> </ul>					

<p>9)Demil E. <i>et al.</i> (2021). <b>Prevalence of bovine viral diarrhea virus antibodies and risk factors in dairy cattle in Gondar city, Northwest Ethiopia.</b> Preventive Veterinary Medicine, 191, 105363.</p>	<ul style="list-style-type: none"> <li>• 339 sera from dairy cattle were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was -at animal-level: 26.84% -at herd-level: 68.3 %.</li> </ul>					
<p>10)Messele Y.E. <i>et al.</i> (2021). <b>Seroprevalence of major infectious causes of dairy cattle reproductive problems in central Ethiopia.</b> Research Square.</p>	<ul style="list-style-type: none"> <li>• 86 cattle sera were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was 38.4%.</li> </ul>					
<p>11)Acharya M. P. <i>et al.</i> (2020). <b>Screening of major infectious causes of infertility in dairy cattle of Nepal.</b> In 11th National Workshop on Livestock and Fisheries Research in Nepal (p. 62).</p>	<ul style="list-style-type: none"> <li>• 368 sera from dairy cattle were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was 3.8%.</li> </ul>					
<p>12)Asnake P. <i>et al.</i> (2020). <b>Seroprevalence of Bovine Viral Diarrhea Virus (BVDV) and Its Associated Risk Factors in Dairy Cattle in and Around Assela Town, South East Ethiopia.</b> Research Square.</p>	<ul style="list-style-type: none"> <li>• 225 sera were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was 8.4%.</li> </ul>					
<p>13)Olum M.O. <i>et al.</i> (2020). <b>A cross-sectional study on infertility and its causes in small holder dairy cattle in selected counties of Kenya.</b> International Journal of Veterinary Science, 9(4), 534-539.</p>	<ul style="list-style-type: none"> <li>• 545 sera were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was 52.3%.</li> </ul>					

<p>14)Irianingsih S.H. <i>et al.</i> (2019). <b>Genetic analysis of NS5B gene from bovine viral diarrhoea virus-infected cattle in Central and East Java, Indonesia.</b> <i>Veterinary World</i>, 12(7), 1108.</p>	<ul style="list-style-type: none"> <li>• 61 BVDV-positive serum samples from a sera bank originating from active and passive surveillance of cattle that had been tested for BVDV antigen were used using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence was 19.7%.</li> </ul>					
<p>15)Bello S.M. <i>et al.</i> (2016). <b>Detection of antibodies to bovine viral diarrhoea virus in cattle presented for slaughter at Sokoto metropolitan abattoir, Nigeria.</b> <i>Journal of Veterinary Medicine and Animal Health</i>, 8(2), 11-14.</p>	<ul style="list-style-type: none"> <li>• 372 serum samples from dairy cattle were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> overall seroprevalence of 66.4%.</li> </ul>					

## MILK

<p>16)Sajeeb M.S.M. <i>et al.</i> (2025). <b>Prevalence and Risk Factors of Bovine Viral Diarrhoea Virus Antibodies in Dairy Herds of Bangladesh.</b> <i>Veterinary Sciences</i>, 12(8), 739.</p>	<ul style="list-style-type: none"> <li>• 138 <b>bulk milk samples</b> from dairy herds were screened using the ID SCREEN®BVD P80 Antibody Competition; subsequently, 767 <b>individual milk samples</b> were tested from cows in herds that screened positive.</li> <li>• <i>Results:</i> overall seroprevalence was -at herd-level: 72.5% -at cow-level in positive herds: 93.3%.</li> </ul>					
<p>17)McCarthy M-C <i>et al.</i> (2021). <b>Longitudinal Prevalence of Antibodies to Endemic Pathogens in Bulk Tank Milk Samples From Dairy Herds Engaged or Not in Contract Heifer Rearing.</b> <i>Front. Vet. Sci.</i> 8:785128.</p>	<ul style="list-style-type: none"> <li>• <b>bulk tank milk samples</b> were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <i>Results:</i> seroprevalence 86 % in 2018 and 73% in 2019.</li> </ul>					

## RUMINANTS (domestic and wild)

<p>18)Rahman A. <i>et al.</i> (2025). <b>Prevalence and Associated Risk Factors of Bovine Viral Diarrhoea (BVD) in Ruminants in Selangor.</b> Jurnal Medik Veterinar, 8(1).</p>	<ul style="list-style-type: none"> <li>• Sera from 176 <b>cattle</b>, 212 <b>goats</b>, 100 <b>sheep</b>, and 108 <b>deer</b> were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> seroprevalence was           <ul style="list-style-type: none"> <li>-in cattle: 29.54%</li> <li>-in goats: 11.3%</li> <li>-in sheep: 50%</li> <li>-in deer: 0%.</li> </ul> </li> </ul>	
---	---	--

## OTHER SPECIES

<p>19)Ferrara G. <i>et al.</i> (2024). <b>Pigs in southern Italy are exposed to three ruminant pathogens: an analysis of seroprevalence and risk factors analysis study.</b> BMC veterinary research, 20(1), 183.</p>	<ul style="list-style-type: none"> <li>• 414 <b>pig</b> sera were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> seroprevalence was 3%.</li> </ul>	
<p>20)Al-Mubarak A.I.A. <i>et al.</i> (2022). <b>Risk-associated factors associated with the bovine viral diarrhea virus in dromedary camels, sheep, and goats in abattoir surveillance and semi-closed herd system.</b> Veterinary World, 15(8): 1924–1931.</p>	<ul style="list-style-type: none"> <li>• 1012 sera from <b>dromedary camels</b> (906 from abattoir surveillance and 106 from semi-closed dromedary camel population), 84 from <b>goats</b>, and 21 from <b>sheep</b> were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> seroprevalence was           <ul style="list-style-type: none"> <li>-in camels from abattoir: 41.1%</li> <li>-in semi-closed camels: 7.5%</li> <li>-in sheep: 0%</li> <li>-in goats: 3.5%.</li> </ul> </li> </ul>	
<p>21)Tesfaye A. <i>et al.</i> (2021). <b>Seroprevalence of bovine viral diarrhea virus in local Borana cattle breed and camels (<i>Camelus dromedarius</i>) in Ethiopia.</b> Veterinary Medicine: Research and Reports, 141-148.</p>	<ul style="list-style-type: none"> <li>• 219 <b>cattle</b> sera and 137 <b>camel</b> sera in Borana zone and 348 camel sera in Shinille zone were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> seroprevalence was           <ul style="list-style-type: none"> <li>-in cattle in Borana zone: 80.82%</li> <li>-in camels in Borana zone: 1.46%</li> <li>-in camels in Shinille zone: 2.29%.</li> </ul> </li> </ul>	

<p>22) Stanitznig A. <i>et al.</i> (2016). <b>Prevalence of important viral infections in new world camelids in Austria.</b> <i>Wien. Tierarztl. Monatsschr.</i> 103, 92-100.</p>	<ul style="list-style-type: none"> <li>• 447 sera from 186 <b>llamas</b> and 261 <b>alpacas</b> were examined using the ID SCREEN®BVD P80 ANTIBODY COMPETITION, <b>Serum Neutralisation Test (SNT)</b>.</li> <li>• <b>Results:</b> one sample was positive for BVDV antibodies (0.2%); this positive result was retested by SNT which confirmed the result. <b>The ID SCREEN®BVD P80 ANTIBODY COMPETITION is able to detect antibodies against BVDV in New World Camelids, confirmed by SNT.</b></li> </ul>	Correlation with other techniques	
---	---	-----------------------------------	--

## VACCINATION/EXPERIMENTAL STUDIES

<p>23) Dänicke S. <i>et al.</i> (2018). <b>Antibody response of growing German Holstein bulls to a vaccination against bovine viral diarrhea virus (BVDV) is influenced by <i>Fusarium</i> toxin exposure in a non-linear fashion.</b> <i>Mycotoxin research</i>, 34, 123-139.</p>	<ul style="list-style-type: none"> <li>• Influence of <i>Fusarium</i> toxin exposure was studied on antibody response of growing bulls to a <b>vaccination against bovine viral diarrhea virus (BVDV)</b>; sera were taken at days 0 (before vaccination), 21, 28, 47, 56, and 70 and tested using the ID SCREEN®BVD P80 Antibody Competition. Sera taken at the end of the study were additionally analyzed by a <b>standard microneutralization test</b> against BVDV-isolate.</li> <li>• <b>Results:</b> the ID SCREEN®BVD P80 ANTIBODY COMPETITION allowed to follow influence of <i>Fusarium</i> dose on antibody response after infection with BVDV; <b>all samples which were tested positive in ELISA were also confirmed to be positive serum in the microneutralization test.</b></li> </ul>	Correlation with other techniques	
<p>24) Grandoni F. <i>et al.</i> (2020). <b>Assessment of Multicolor Flow Cytometry Panels to Study Leukocyte Subset Alterations in Water Buffalo (<i>Bubalus bubalis</i>) During BVDV Acute Infection.</b> <i>Front. Vet. Sci.</i> 7:574434.</p>	<ul style="list-style-type: none"> <li>• Pregnant buffalo cows were infected with BVDV-1 at 81 (trial 1) and 203 (trial 2) days post artificial insemination; serum samples were collected and tested using the ID SCREEN®BVD P80 Antibody Competition at 0, 3, 4, and 14 days after infection (dpi).</li> <li>• <b>Results:</b> all animals showed seroconversion, between 14 and 27 dpi, and all calves born from these buffaloes had BVDV antibodies.</li> </ul>	Particular species	

## PESTIVIRUSES/BORDER DISEASE

### EPIDEMIOLOGICAL STUDIES

<p>25)Guesmi K. <i>et al.</i> (2024). <b>Enquête sérologique sur la maladie des frontières (Border Disease) dans des élevages ovins en Tunisie et les facteurs de risque associés.</b> Bulletin zoosanitaire N°29.</p>	<ul style="list-style-type: none"> <li>• 792 <b>sheep</b> sera from 26 herds with problems of abortion were tested for antibodies against Border Disease using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> seroprevalence was -at herd-level: 100% -at animal-level: 53.3%.</li> </ul>	
<p>26)Potârniche A.V. <i>et al.</i> (2020). <b>Herd-level seroprevalence of pestivirus infection in goat population in Poland.</b> Polish Journal of Veterinary Sciences, 229-233.</p>	<ul style="list-style-type: none"> <li>• Sera from 910 <b>goats</b> were tested using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> seroprevalence was 0.8%.</li> </ul>	
<p>27)Kavoosy M. <i>et al.</i> (2018). <b>Seroprevalence of pestivirus in small ruminants in Khorasan Razavi province, Iran.</b> Iranian Journal of Ruminants Health Research, 3(1), 11-18.</p>	<ul style="list-style-type: none"> <li>• Sera from 273 <b>sheep</b> and 179 <b>goats</b> were tested for antibodies against the pestiviruses using the ID SCREEN®BVD P80 Antibody Competition.</li> <li>• <b>Results:</b> -217 sheep and 127 goats tested positive -overall seroprevalence was 75.9%</li> </ul>	

### VACCINATION/EXPERIMENTAL STUDIES

<p>28)Meyer G. <i>et al.</i> (2021). <b>Vaccination of sheep with bovine viral diarrhea vaccines does not protect against fetal infection after challenge of pregnant ewes with border disease virus.</b> Vaccines, 9(8), 805.</p>	<ul style="list-style-type: none"> <li>• <b>Challenge of ewes with Border Disease Virus after vaccination with BVD vaccines</b> was followed using the ID SCREEN®BVD P80 Antibody Competition. <b>Serum neutralization assays (SNT)</b> of ewes were performed before vaccination, on day of challenge and at the end of the experiment.</li> <li>• <b>Results:</b> The two attenuated BVDV vaccines but not the inactivated one, induced seroconversion against NS3 in sheep while the three vaccines induce a neutralizing antibody response against BVDV-1 and BDV-6.</li> </ul>	Correlation with other techniques
--	---	-----------------------------------