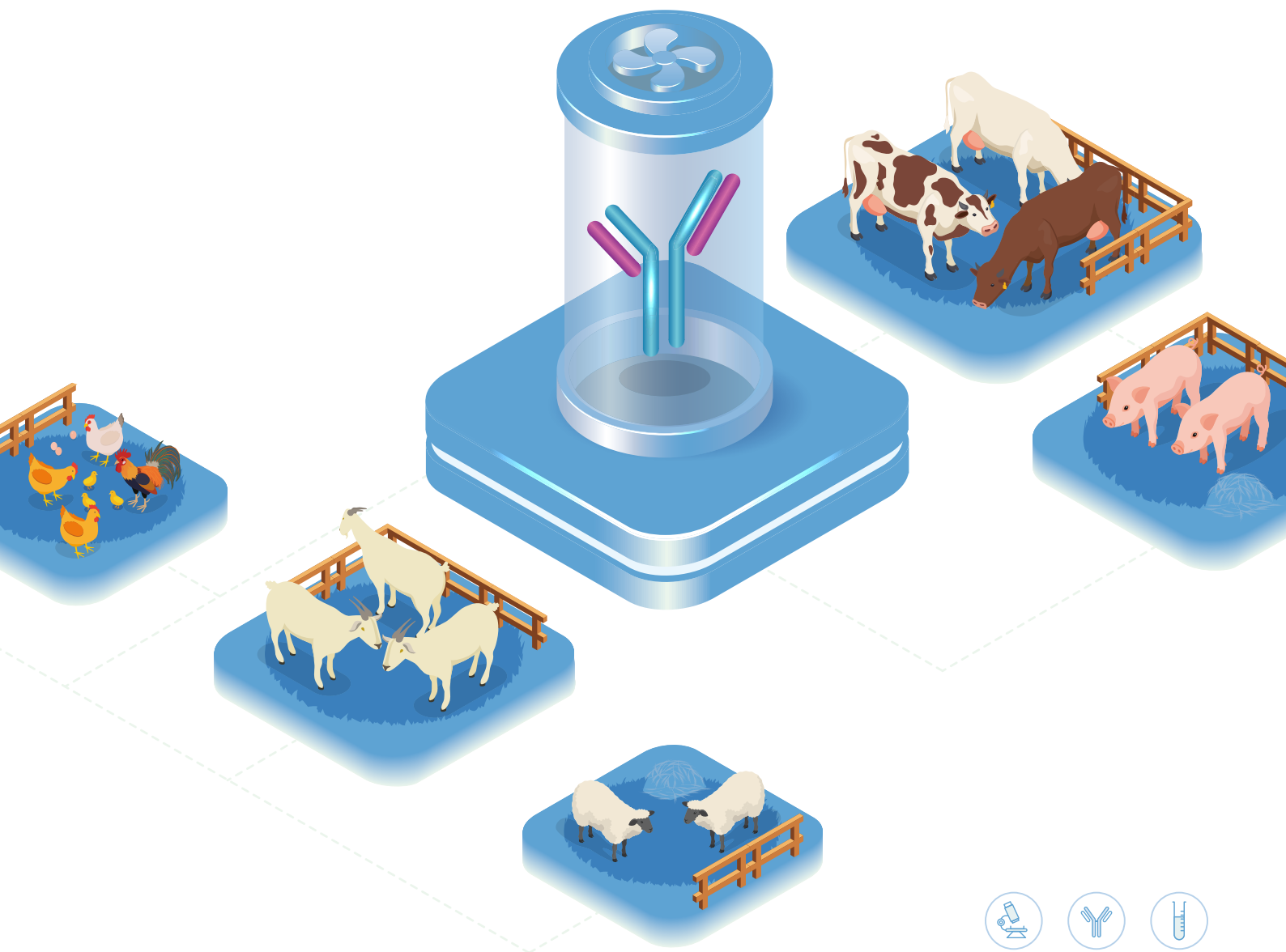


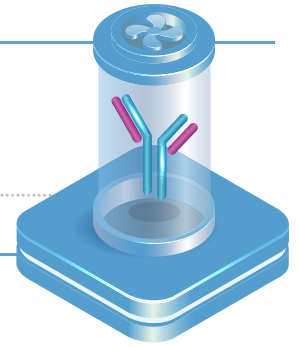
VDPPro[®] ELISA

Product Catalog

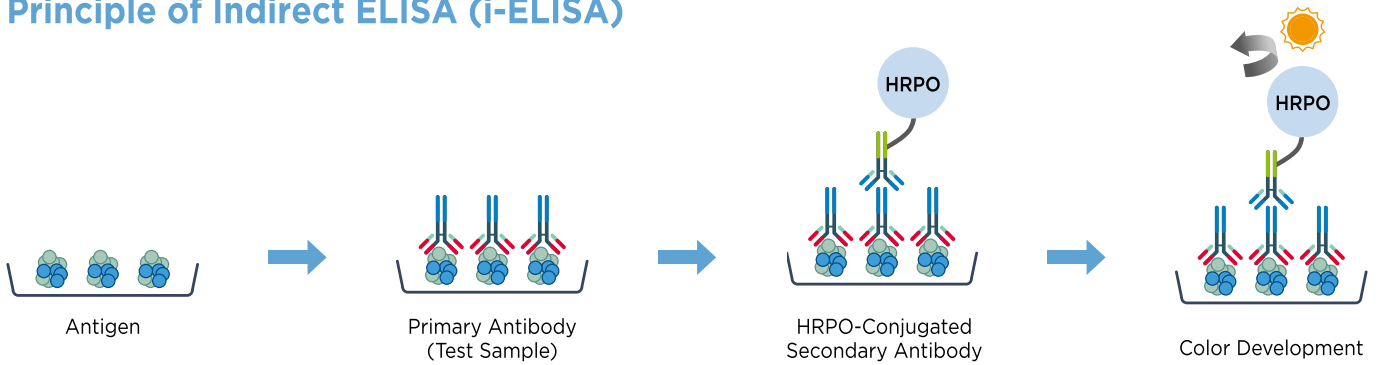


Types of ELISA

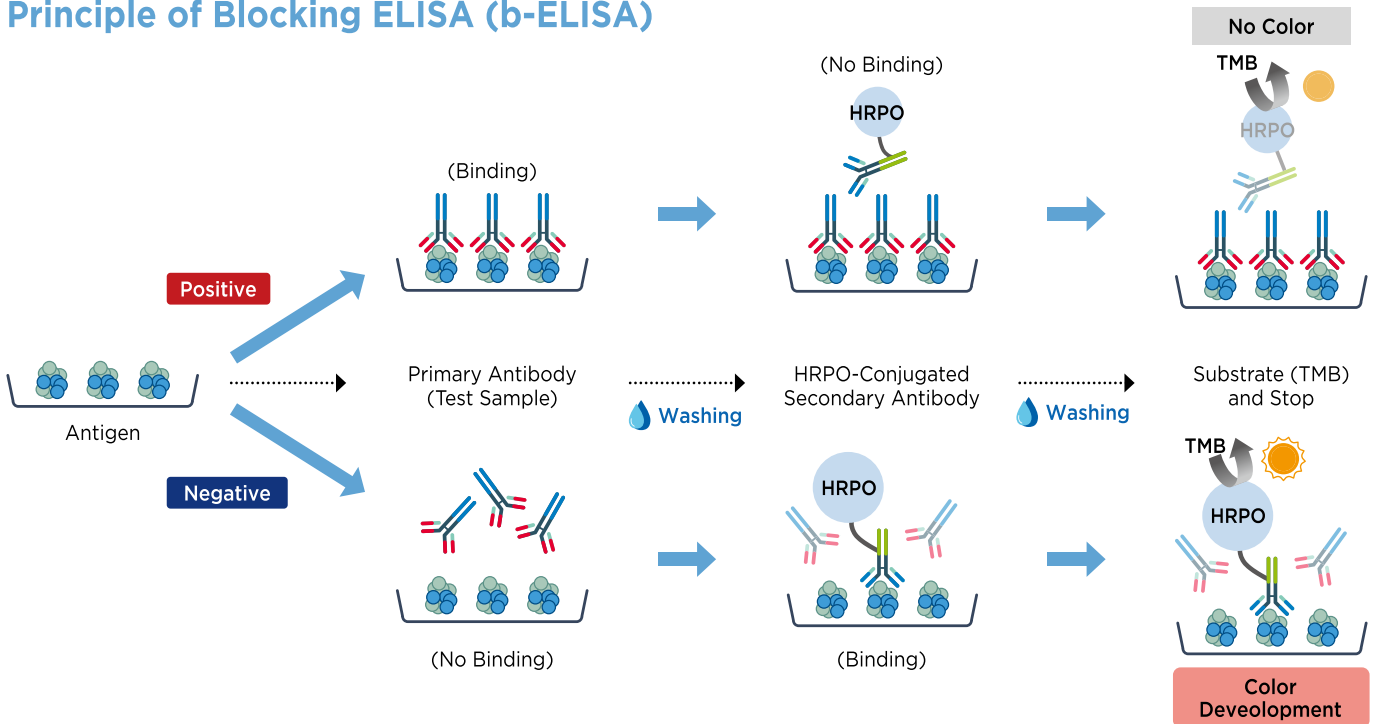
Enzyme-Linked immunosorbent Assay



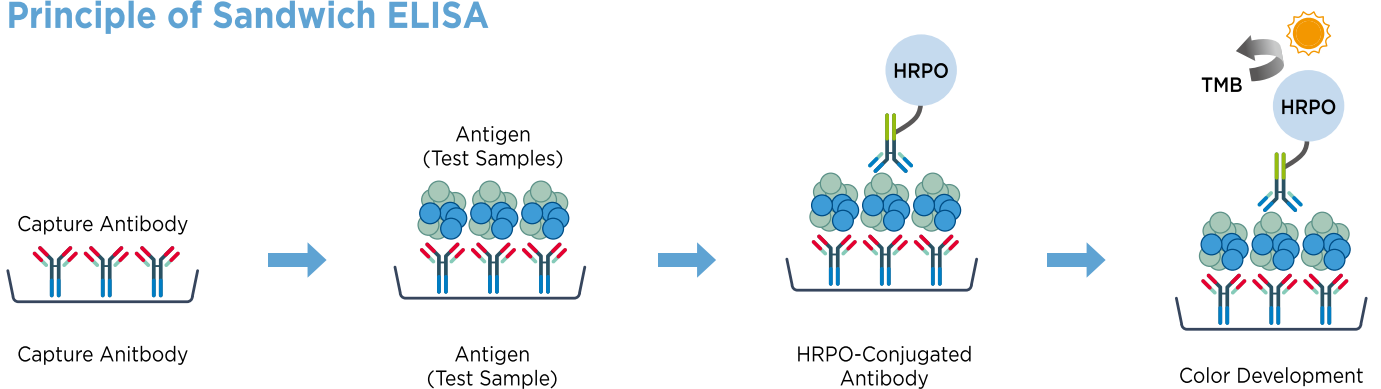
Principle of Indirect ELISA (i-ELISA)



Principle of Blocking ELISA (b-ELISA)



Principle of Sandwich ELISA



VDPRO[®] ELISA

Product Catalog

For One Health



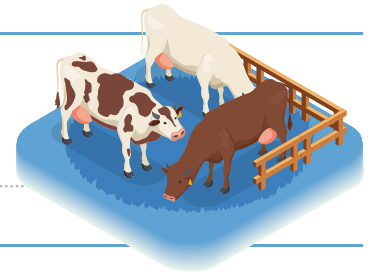


CONTENTS

	Cat. No.	Product Name	Page	
Ruminant	EB-BRU-01	VDPro® Brucella AB ELISA	01	
	EB-BLV-01	VDPro® Bovine Leukosis Ab b-ELISA	02	
	EB-BTB-01	VDPro® Bovine Tuberculosis AB ELISA	03	
	EB-BVD-01	VDPro® BVDV AB ELISA	04	
	EB-BVD-02	VDPro® BVDV Ag ELISA	05	
	EB-LSD-01	VDPro® LSDV Ab ELISA	06	
	EM-FMD-01	Foot and Mouth Disease (*DIVA)	VDPro® FMDV NSP AB ELISA	08
	EM-FMD-02		VDPro® FMDV Type O ELISA	09
	EM-FMD-03		VDPro® FMDV Type A AB ELISA	10
	EM-FMD-04		VDPro® FMDV Type Asia1 AB ELISA	11
EM-FMD-06		VDPro® FMDV/SVA Ag ELISA	12	
Pig	ES-ASF-05	VDPro® ASFV Ab i-ELISA ver2.0	13-14	
	ES-CSF-03	VDPro® CSFV AG ELISA	15	
	ES-CSF-02	Systemic Disease	VDPro® CSFV Ab c-ELISA (*DIVA)	16
	ES-CSF-05		VDPro® CSFV Erns Ab b-ELISA (*DIVA)	17
	EB-BVD-02		VDPro® BVDV Erns Ab i-ELISA (*DIVA)	17
	ES-PCV-01		VDPro® PCV2 AB ELISA	18
	ES-ADV-01	Reproductive Failure Disease (RFD)	VDPro® ADV AB Screen ELISA (*DIVA)	20
	ES-ADV-02		VDPro® ADV gI AB ELISA (*DIVA)	21
	ES-JEV-01		VDPro® Japanese Encephalitis AB ELISA	22
	ES-AP2-01	Respiratory Disease (RD)	VDPro® APP2 AB ELISA	23
	ES-AP5-01		VDPro® APP5 AB ELISA	24
	ES-HPA-01		VDPro® HP AB ELISA	25
	ES-MHY-01		VDPro® MH AB ELISA	26
ES-PRR-03	RFD & RD	VDPro® PRRSV AB ELISA	27	
Pig & Horse	ES-JEV-02	VDPro® JEV Ab b-ELISA	28	
Poultry	EP-AIV-01	VDPro® AIV AB ELISA	29	
	EP-IBD-01	VDPro® IBDV AB ELISA	30	
	EP-IBV-01	VDPro® IBV AB ELISA	31	
	EP-MSY-01	VDPro® MS AB ELISA	32	
	EP-NDV-01	VDPro® NDV AB ELISA	33	

*DIVA : Differentiating infected from vaccinated animals

VDPro® Brucella AB ELISA



Bovine Brucellosis

Bovine brucellosis causes abortion due to placentitis and endometritis, etc. It also causes infertility in bulls due to orchitis and sperm deformity, etc. without any special external symptoms. Bovine brucellosis is caused by *Brucella abortus*. Currently, there is no safe vaccine or effective treatment for bovine brucellosis so it is important to diagnose quickly and accurately through antibody tests. **VDPro® Brucella AB ELISA** is *Brucella abortus* specific somatic antigen based two-step Indirect ELISA for the detection of the specific antibodies induced by infection of *Brucella abortus* in cattle.

Introduction

- + **Intended use** : Detection of *Brucella abortus* antibody
- + **Species** : Cattle
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : *Brucella abortus* specific somatic antigen

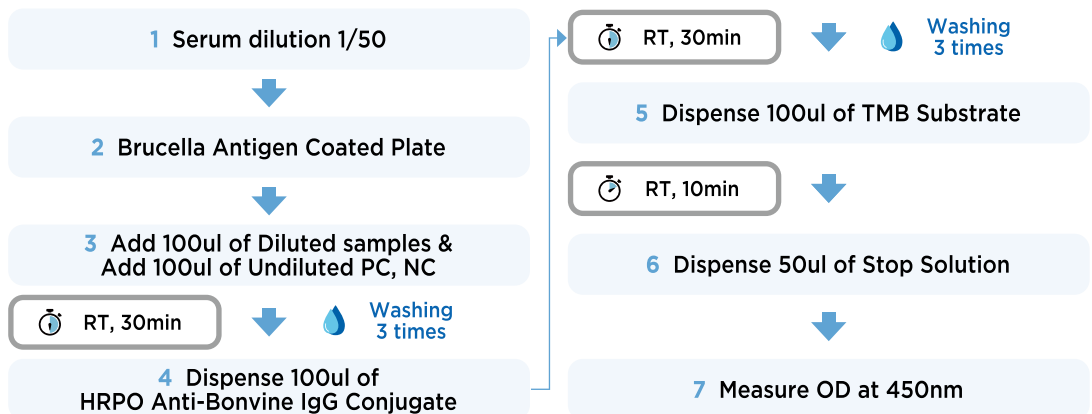


Features

- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + High reproducibility and high accuracy in a short reaction time.
- + High correlation with Rose bengal test results and represents a relatively high degree of sensitivity and specificity compared to other brands.
- + *Brucella abortus* verified product in cattle.

No.	Test	Results
1	Analytical Sensitivity	- More sensitive than Rose bengal test and other company ELISA
2	Analytical Specificity	- No cross reaction (FMD type O, BVD, Bovine tuberculosis)
3	Reproducibility	- Lot to lot : $r^2 = 0.99$ - Well to well : Less than 5% CV - Inter laboratory : Higher than 0.98 (r^2)
4	Clinical Sensitivity	- 97.2% (176/181) vs Rose bengal test positive serum - 98.7% (152/154) vs other company ELISA positive serum
5	Clinical Specificity	- 99.45% (362/364) vs Rose bengal test negative serum

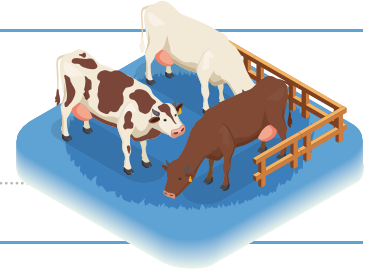
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EB-BRU-01	VDPro® Brucella AB ELISA	192 Tests, 480 Tests

VDPro® Bovine Leukosis Ab b-ELISA



Bovine Leukosis

Bovine leukemia virus (BLV) is a retrovirus that may cause lymphosarcoma in cattle. The virus resides in blood lymphocytes where circulating antibodies are unable to neutralize it. Therefore, once an animal is infected with BLV, it is infected for life. BLV is economically significant to the producer because of premature culling or death as a result of lymphosarcoma.

VDPro® Bovine Leukosis Ab b-ELISA is designed to detect presence of anti BLV gp51 antibody in bovine serum.

Introduction

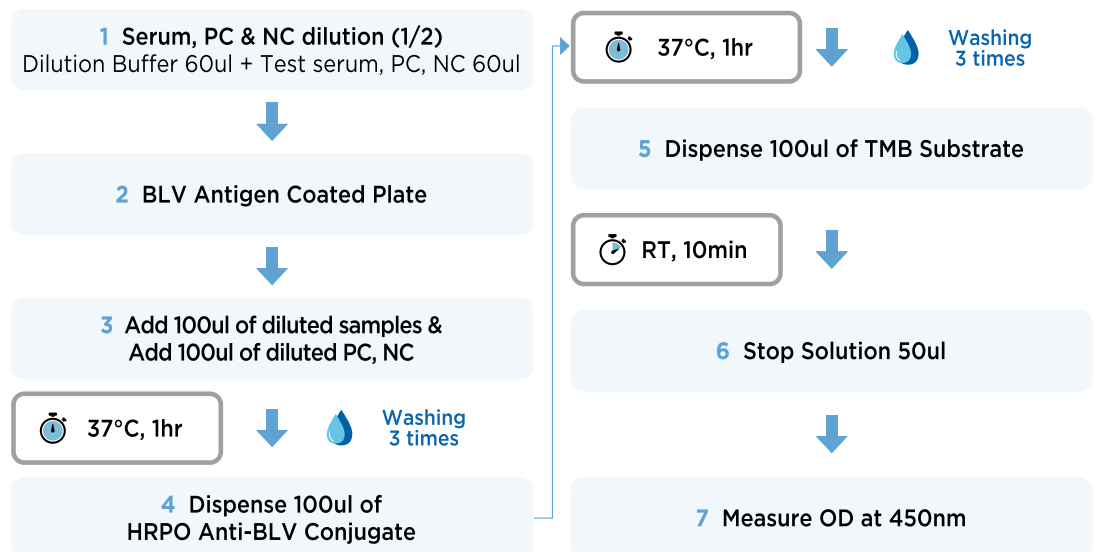
- + **Intended use** : Detection of Bovine leukosis antibody
- + **Species** : Cattle
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : Purified, inactivated BLV antigen



Features

- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + High reproducibility and high accuracy in a short reaction time
- + Clinical Sensitivity : 100.0% (65/65) vs commercial ELISA positive serum
100.0% (65/65) vs AGID test positive serum
- + Clinical Specificity : 100.0% (213/213) vs commercial ELISA negative serum
97.7% (208/213) vs AGID test negative serum

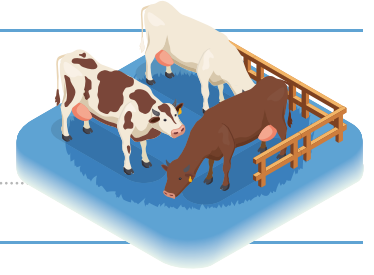
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EB-BLV-01	VDPro® Bovine Leukosis Ab b-ELISA	192 Tests, 480 Tests

VDPro® Bovine Tuberculosis AB ELISA



Bovine Tuberculosis

Bovine tuberculosis is chronic debilitating zoonosis relevant to the disease classification list of WOA and is officially classified and controlled as the second class cattle plague in Korea. It is difficult to find symptoms in the initial stage of infection, but in the later stage, nodules and lumps are attached to lungs, abdominal organs, lymphatic gland and the wall of the chest cavity, and lesions are found even in breast and bone.

VDPro® Bovine Tuberculosis AB ELISA is a bovine tuberculosis antigen based two-step Indirect ELISA for the detection of the specific antibodies induced by infection of *Mycobacterium bovis* in cattle.

Introduction

- + **Intended use** : Detection of Bovine tuberculosis total IgG antibody
- + **Species** : Cattle
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : Bovine tuberculosis recombinant protein



Features

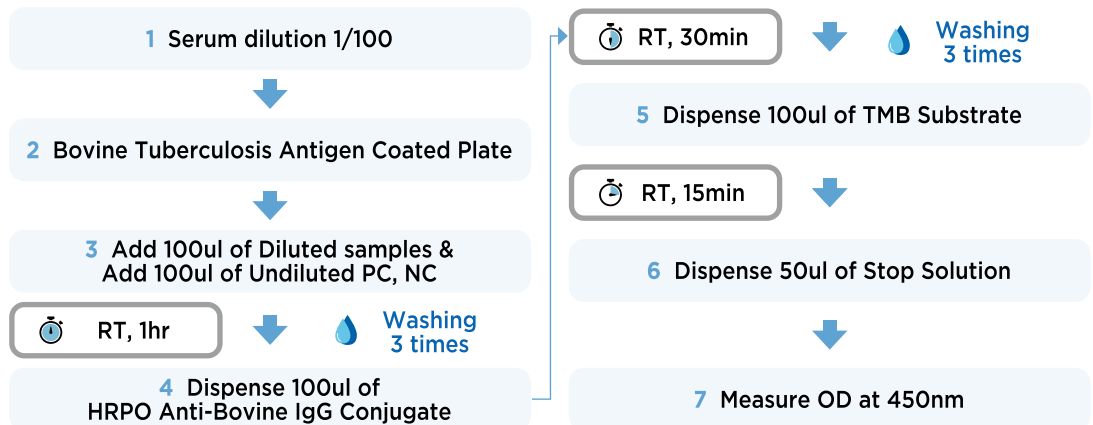
- + Check antibody (Total IgG) produced by the bovine tuberculosis infection.
- + Relatively high levels of sensitivity and specificity compared to other brands.
- + This product is a test that increases the accuracy of the late infection.
- + No cross-reactivity with other disease (FMD type O, BVD, Bovine brucellosis).
- + Clinical Sensitivity : 87.2% (Tuberculosis test positive serum in South Korea)

Number of samples	VDPro® Bovine Tuberculosis AB ELISA					Sensitivity (%)
	Positive	Negative	Mean S/P	Min S/P	Max S/P	
234	204	30	1.87	-0.1	3.58	87.2

- + Clinical Specificity : 100% (Tuberculosis test negative serum in South Korea)

Number of samples	VDPro® Bovine Tuberculosis AB ELISA					Specificity (%)
	Positive	Negative	Mean S/P	Min S/P	Max S/P	
90	0	90	0.01	-0.1	0.12	100

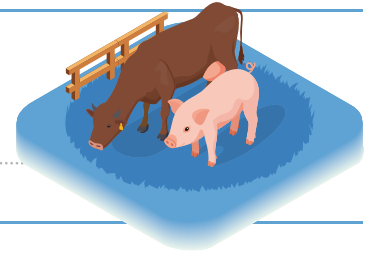
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EB-BTB-01	VDPro® Bovine Tuberculosis AB ELISA	192 Tests, 480 Tests

VDPro® BVDV AB ELISA



Bovine Viral Diarrhea

Bovine viral diarrhea (BVD) is the first class legally notifiable communicable disease in Korea and a list disease determined by the WOAH. It is known to cause serious damage to cattle. BVD is caused by the bovine viral diarrhea virus (BVDV). It is a virus from the *Pestivirus* genus similar to the Classical swine fever virus (CSFV). BVD diagnosis should be frequently conducted with antibody and antigen tests. Antibody surveillance is crucial especially after vaccination.

VDPro® BVDV AB ELISA is designed to detect presence of BVDV antibody in bovine or pig serum by blocking ELISA format.

Introduction

- + **Intended use** : Detection of BVD antibody
- + **Species** : Cattle (or pig)
- + **Specimens** : Serum or plasma
- + **Method** : Blocking ELISA
- + **Coated antigen** : BVDV E2 recombinant protein



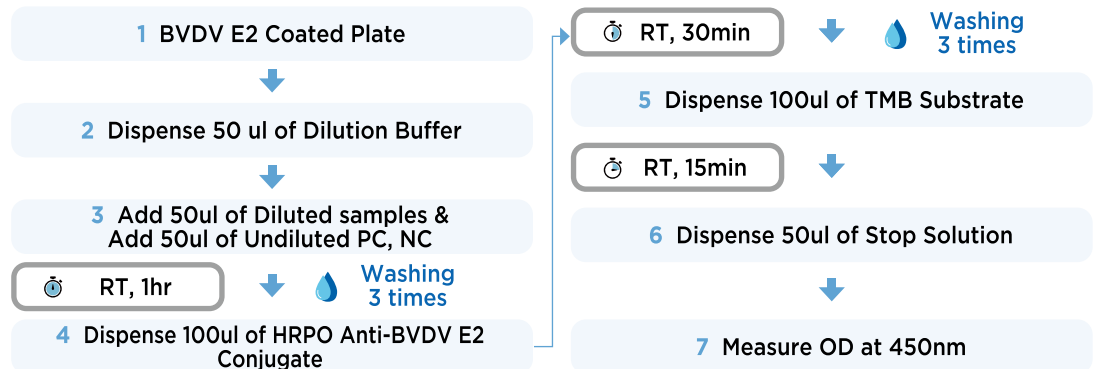
Features

- + Good correlation with virus neutralization test (VNT).
- + Suitable for the antibody testing of the vaccination group.
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + The sensitivity of VDPro® BVDV AB ELISA was confirmed to be 95.0% against the VNT positive bovine and pig serum samples.
- + The specificity of VDPro® BVDV AB ELISA was confirmed to be 99.0% against the VNT negative bovine and pig serum samples.

Panel	SN test	Sensitivity
Bovine Group 1	VNT ≥ 40	100.0% (85/85)
Bovine Group 2	VNT ≤ 20	97.1% (34/35)
Pig Group 3	VNT ≤ 63	96.8% (61/63)
Pig Group 4 *Possibly cross reaction with CSFV infection	VNT ≥ 128	79.5% (31/39)
Total		95.0% (211/222)

Panel	SN test	Specificity
Bovine Group 5	VNT < 5	98.4% (63/64)
Pig Group 6	CSFV +	99.0% (192/194)
Pig Group 7	CSFV -	100.0% (34/34)
Total		99.0% (289/292)

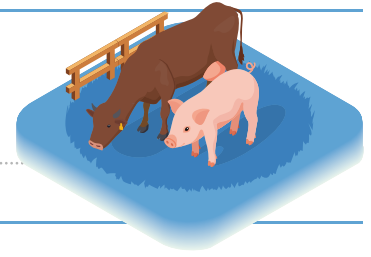
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EB-BVD-01	VDPro® BVDV AB ELISA	192 Tests, 480 Tests

VDPro® BVDV Ag ELISA



Bovine Viral Diarrhea

Bovine viral diarrhea (BVD) is a wasting disease of cattle that outbreaks worldwide and is the World Organization for Animal Health (WOAH) listed disease. There are two forms of infection: transiently infected (TI) cattle which is the most common infection after birth, and persistently infected (PI) cattle which is infected through placenta during early stage of gestation and shed the virus throughout their lifetime. Farm damage and economic losses resulting from persistently infected (PI) cattle is significant around the world, and monitoring and implementing rapid control measures to eradicate PI are important.

VDPro® BVDV Ag ELISA is an enzyme-linked immunosorbent assay (ELISA) for detection of bovine viral diarrhea virus (BVDV) antigen in bovine serum/plasma and ear notch. This diagnostic kit can detect Bovine Viral Diarrhea Virus antigen (BVDV Erns) simply, sensitively and rapidly.

Introduction

- + **Intended use** : Detection of specific antigen for BVDV Erns
- + **Species** : Cattle
- + **Specimens** : Serum or plasma and ear notch
- + **Method** : Sandwich ELISA
- + **Coated antibody** : Anti-BVDV Erns antibody

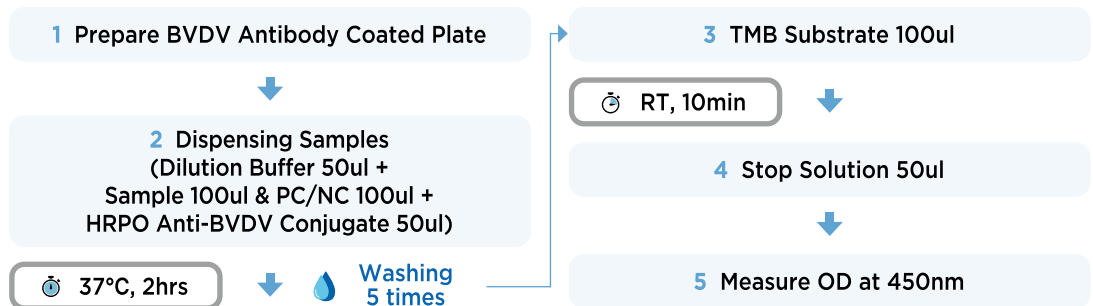


Features

- + The limit of detection for BVDV was variable depending on the virus isolates, but less than 10⁴ TCID₅₀/ml.
- + No cross-reactivity with several bovine viral pathogens (BCV, BRV, Chuzan virus, Ibaraki virus, Akabane virus, Anino virus).
- + Excellent performance (sensitivity and specificity) when testing ear notch samples.
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + **Faster reaction time and simpler test steps compared to competitors' product.**

	VDPro® BVDV Ag ELISA	A company
Reaction time	2 hours 10 minutes	2 hours 40 minutes
Test steps	3 steps	4 steps

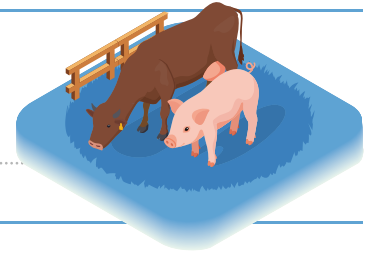
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EB-BVD-02	VDPro® BVDV Ag ELISA	192 Tests, 480 Tests

VDPro® LSDV Ab ELISA



Lumpy Skin Disease

Lumpy skin disease (LSD) is the first class legally notifiable communicable disease in Korea and a list disease determined by the WOAH. It is known to cause serious damage to cattle. LSD is caused by the bovine viral diarrhoea virus (BVDV). It is a virus from the *Pestivirus* genus similar to the Classical swine fever virus (CSFV). BVD diagnosis should be frequently conducted with antibody and antigen tests. Antibody surveillance is crucial especially after vaccination.

VDPro® LSDV Ab ELISA an enzyme-linked immunosorbent assay (ELISA) for detection of bovine lumpy skin disease virus (LSDV) antibody in bovine serum/plasma.

Introduction

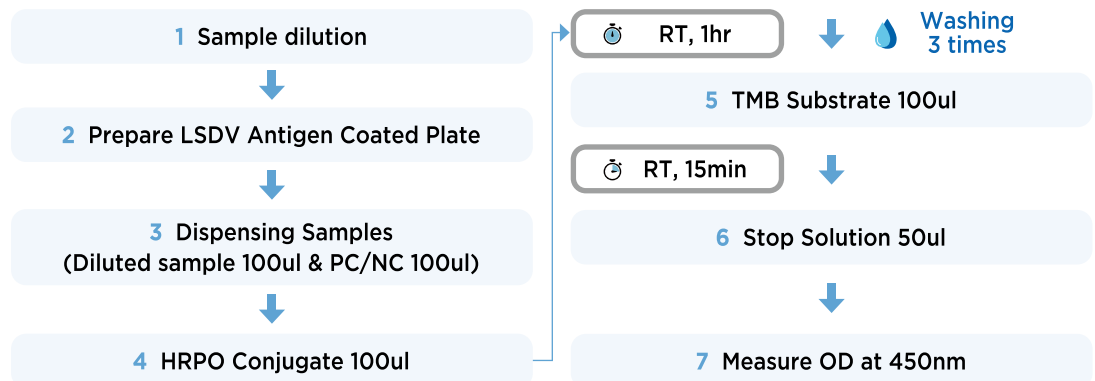
- + **Intended use** : Detection of LSD antibody
- + **Species** : Cattle
- + **Specimens** : Serum or plasma
- + **Method** : Double antigen Indirect ELISA
- + **Coated antigen** : Purified LSDV antigens (Dual coating antigens)



Features

- + High clinical specificity (99.7%)
- + Higher clinical sensitivity compared to commercial LSDV Ab ELISA for LSD vaccinated samples.
- + No cross-reactivity with several bovine viral pathogens (IBR, BRSV, PI-3, BLV, *Brucella*)
- + Limit of Detection (LoD): VNT 11
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate

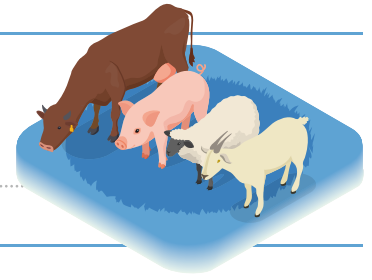
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EB-LSD-01	VDPro® LSDV Ab ELISA	192 Tests, 480 Tests

VDPro® FMDV ELISA



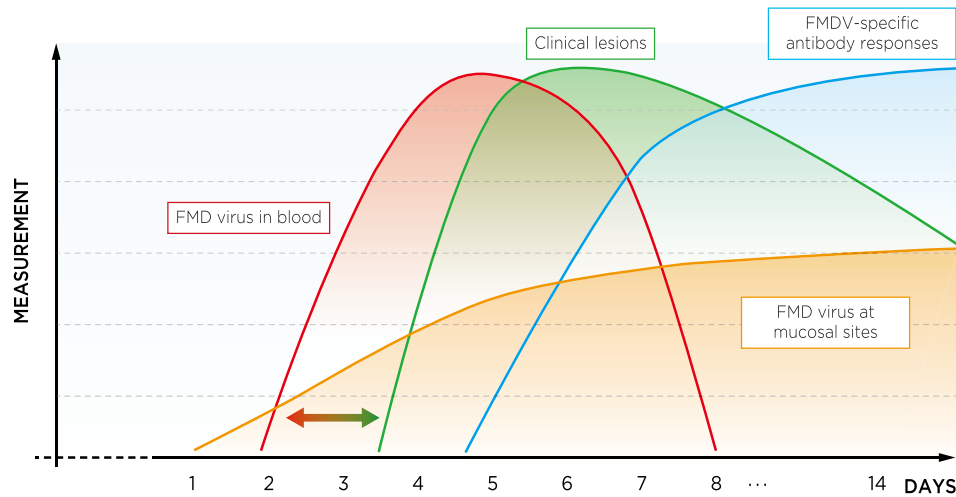
FMDV Diagnosis

Foot-and-Mouth Disease

Foot-and-Mouth Disease (FMD) is the class1 communicable disease in Korea and World Organisation for Aniaml Health (WOAH) listed disease. It is an international epidemic disease that infects cloven-hoofed animals such as cattle, sheep, goat and pig. It is a very contagious disease that requires an intensive surveillence program. In addition, there are seven serotypes O, A, C, Asia1, SAT1, SAT2 and SAT3 so a great variety of diagnostics are necessary.

Introduction

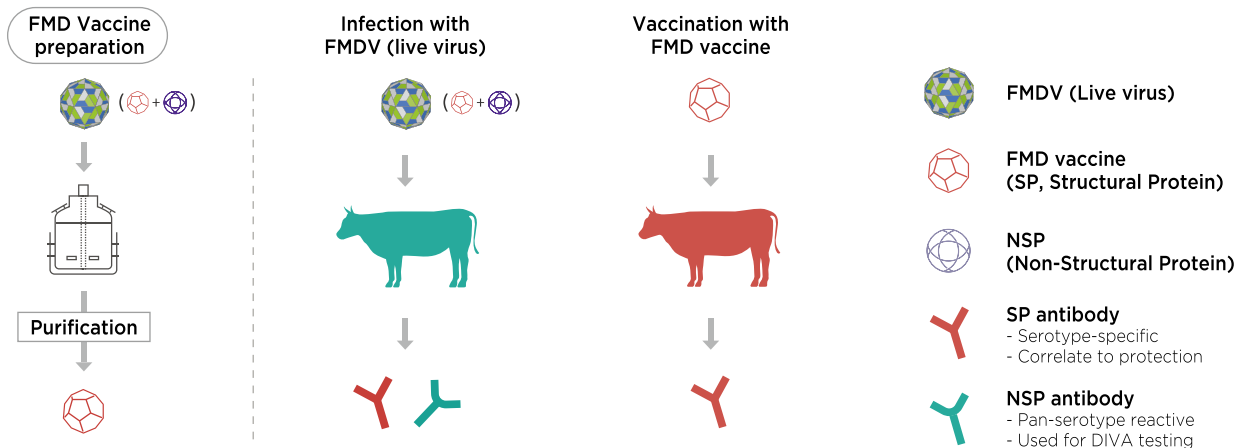
Diagnostic windows for FMD



Features

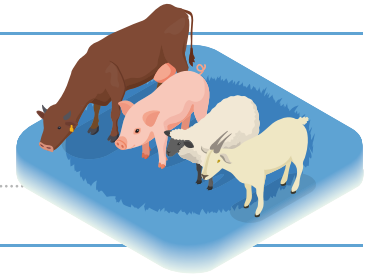
- + VDPro® FMDV ELISA products apply for DIVA (Differentiating Infected from Vaccinated Animals).
- + Good correlation with virus neutralization test (VNT).
- + Highly enhanced reactivity of coating antigen expressed by dual expression system
- + Excellent performance (sensitivity and specificity) regardless of species

FMDV DIVA system



	SP antibody	NSP antibody
Field infection (NSP + SP)	Positive	Positive
Vaccination (SP)	Positive	Negative

VDPro® FMDV NSP AB ELISA



FMDV NSP AB ELISA

VDPro® FMDV NSP AB ELISA detects antibodies against non-structural protein (NSP) of FMDV. The antibody against NSP indicate the natural infection and this product can differentiate the infected animal from the vaccinated one regardless of serotypes and can be used for surveillance tests on both non-occurrence area and vaccination area.

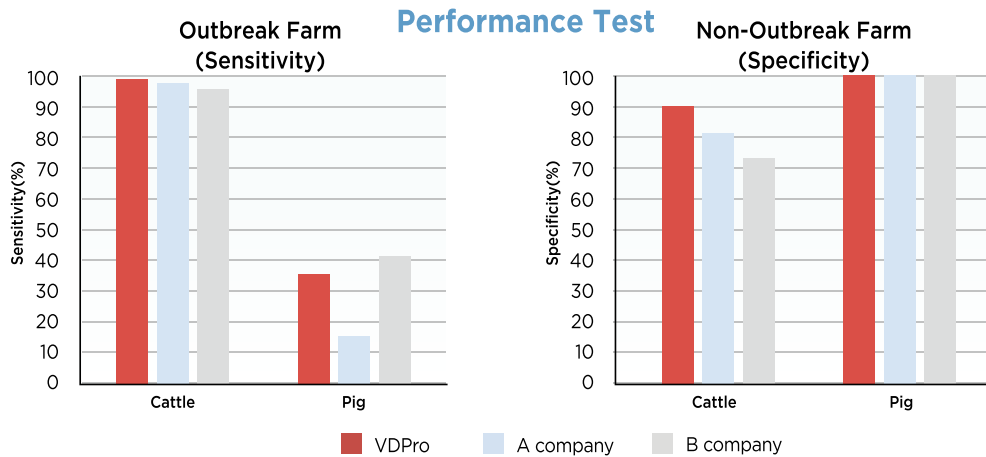
Introduction

- + **Intended use** : Detection of FMDV NSP antibody
- + **Species** : Cattle, sheep, goat and pig
- + **Specimens** : Serum or plasma
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV 3AB recombinant protein

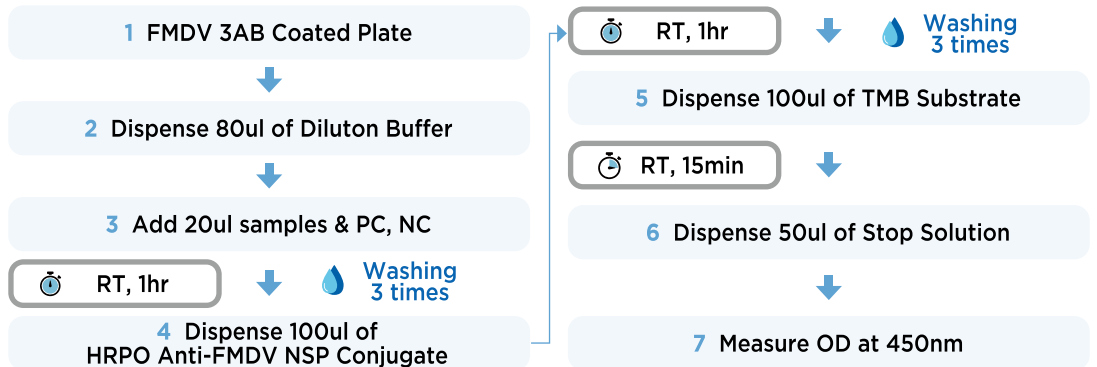


Features

- + Applicable regardless of serotypes of FMDV
- + Excellent quality; Commercialized with our advanced technology.
- + Differential antibody diagnosis of the infected from vaccinated animals
- + Safety security by using recombinant antigen
- + High reproducibility and high accuracy in a short reaction time
- + Useful for a wide range of animal species (cattle, sheep, goat and pig)



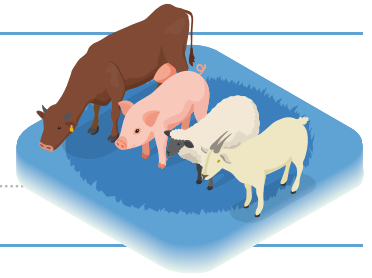
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EM-FMD-01	VDPro® FMDV NSP AB ELISA	192 Tests, 480 Tests

VDPro® FMDV Type O ELISA



FMDV SP AB ELISA

VDPro® FMDV Type O ELISA was developed to detect antibodies against structural protein (SP) antibodies against FMDV Serotype O using recombinant FMDV rP13C protein and monoclonal antibody (mAb) against epitope of FMDV VP1. An antibody test using structural protein is suitable to test vaccine antibodies and can be used in FMDV free area. In areas where animals were vaccinated, SP antibody tests can be used to monitoring the serological response to the vaccination.

Introduction

- + **Intended use** : Detection of antibodies against FMDV type O SP
- + **Species** : Cattle, sheep, goat and pig
- + **Specimens** : Serum or plasma
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV type O P13C recombinant protein (rP13C-O)



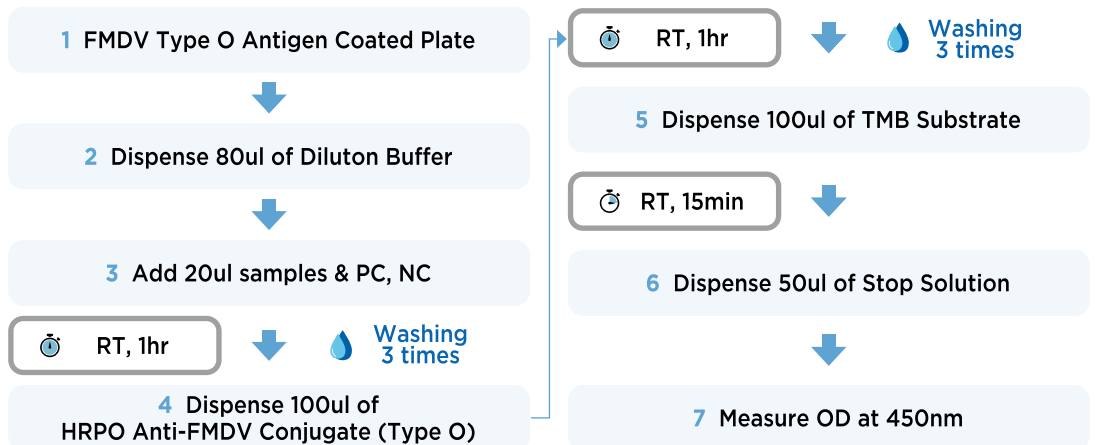
Features

- + Good correlation with viral neutralization test (VNT)
- + Highly enhanced reactivity of coating antigen expressed by dual expression system
- + Excellent performance (sensitivity and specificity) regardless of species.
- + Antibody titer monitoring after vaccination.

Group	Species	Sensitivity	Group	Species	Specificity
VNT Positive (Above VNT45)	Cattle	99.1% (106/107)	VNT Negative (Below VNT45)	Cattle	99.2% (127/128)
	Pig	95.0% (19/20)		Pig	100.0% (149/149)
	Goat	95.5% (21/22)		Goat	100.0% (65/65)
	Sheep	100.0% (3/3)		Sheep	87.1% (27/31)
	Others	100.0% (2/2)		Deer	100.0% (11/11)
Total		98.1% (151/154)	Total		98.7% (379/384)

* Validated with vaccinated and infected animal samples (VNT Positive group)
 * Validated with samples collected in FMD free area (VNT Negative group)

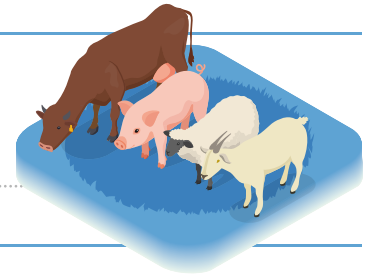
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EM-FMD-02	VDPro® FMDV Type O ELISA	192 Tests, 480 Tests

VDPro® FMDV Type A AB ELISA



FMDV SP AB ELISA

VDPro® FMDV Type A AB ELISA was developed to detect antibodies against FMDV Serotype A using recombinant FMDV rP13C protein and monoclonal antibody (mAb) against epitope of FMDV A VP1. An antibody test using structural protein is suitable to test vaccine antibodies and can be used in FMDV free area. In areas where animals have been vaccinated, SP antibody tests can be used to monitoring the serological response to the vaccination.

Introduction

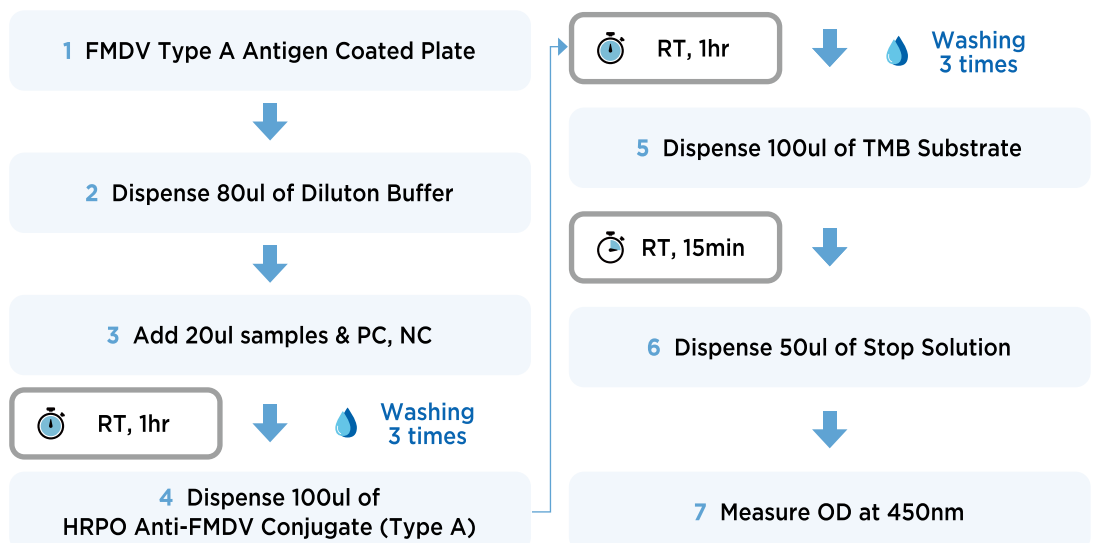
- + **Intended use** : Detection of antibody against FMDV type A
- + **Species** : Cattle, sheep, goat and pig
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV type A P13C recombinant protein (rP13C-A)



Features

- + Highly enhanced reactivity of coating antigen expressed by dual expression system.
- + Antibody titer monitoring after vaccination.
- + The sensitivity of VDPro® FMDV Type A AB ELISA was **100%** (91/91) for the standard serum samples from Pirbright Institute.
- + The specificity of VDPro® FMDV Type A AB ELISA for the field negative samples was confirmed to be **99.7%** (311/312).

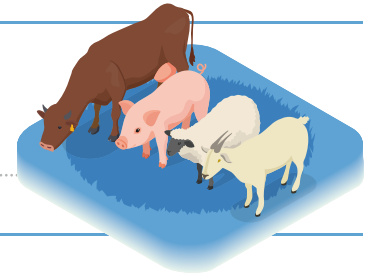
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EM-FMD-03	VDPro® FMDV Type A AB ELISA	192 Tests, 480 Tests

VDPro® FMDV Type Asia1 AB ELISA



FMDV SP AB ELISA

VDPro® FMDV Type Asia1 AB ELISA was developed to detect antibodies against FMDV Serotype Asia1 using recombinant FMDV rP13C protein and monoclonal antibody (mAb) against epitope of FMDV Asia1 VP1. An antibody test using structural protein is suitable to test antibodies and can be used in FMDV free area. In areas where animals have been vaccinated, SP antibody tests can be used to monitoring the serological response to the vaccination.

Introduction

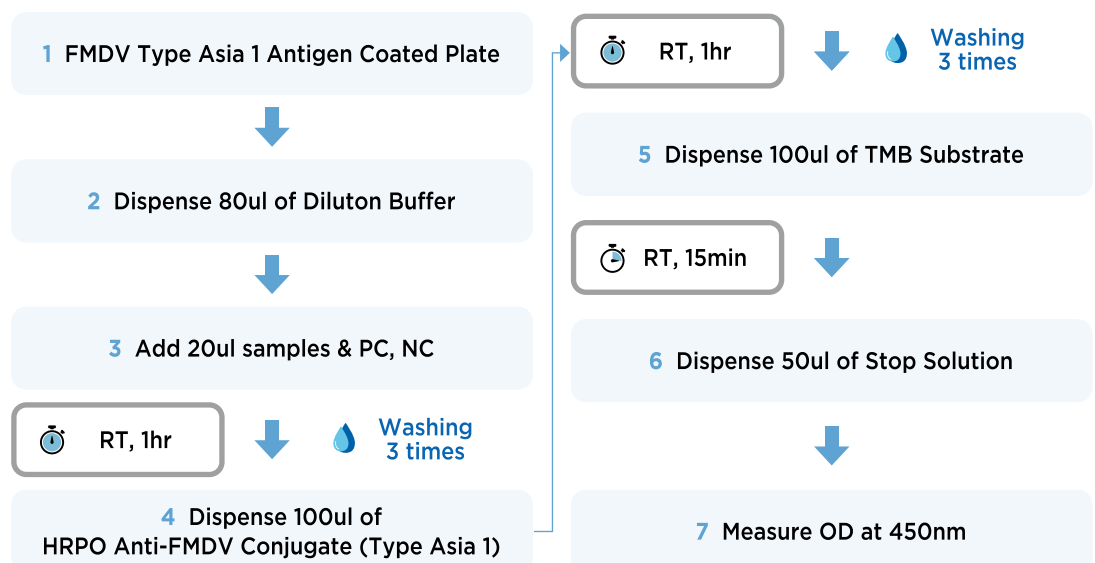
- + **Intended use** : Detection of antibody against FMDV type Asia1
- + **Species** : Cattle, sheep, goat and pig
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV type Asia1 P13C recombinant protein (rP13C-Asia1)



Features

- + Antibody titer monitoring after vaccination
- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + Highly enhanced reactivity of coating antigen expressed by dual expression system.

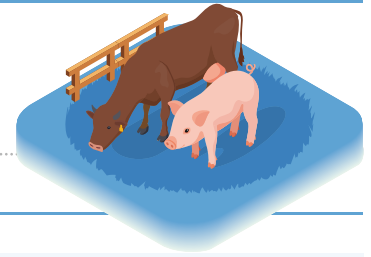
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EM-FMD-04	VDPro® FMDV Type Asia1 AB ELISA	192 Tests, 480 Tests

VDPro® FMDV / SVA Ag ELISA



Foot-and-Mouth Disease

Senecavirus A (Seneca Valley Virus)

Foot-and-Mouth Disease Virus (FMDV) and **Senecavirus A (SVA)** are small, nonenveloped RNA viruses of the *Picornaviridae* family. Vesicular disease caused by SVA is clinically indistinguishable from notable foreign animal diseases, including FMD. This disease is endemic and the lesions are very similar to FMD, so that false alarms from FMD are reported continuously. Therefore, differential diagnosis between FMD and SVA is important.

VDPro® FMDV/SVA Ag ELISA is designed for detection of FMDV/SVA and typing of FMD viruses of type O, A, Asia1. A common FMDV test, detecting any isolates of type O, A, Asia1, SAT1, SAT2, SAT3 and C is also included in the kit.

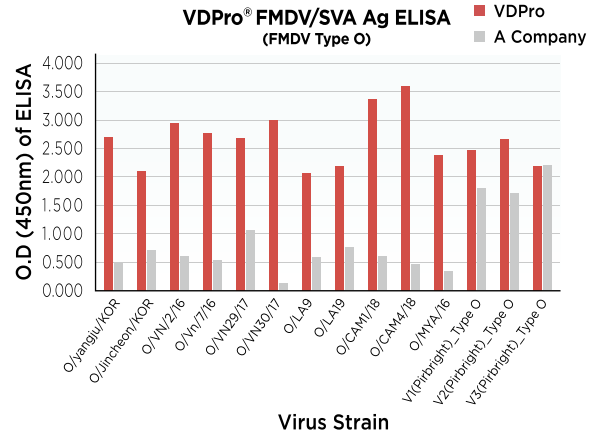
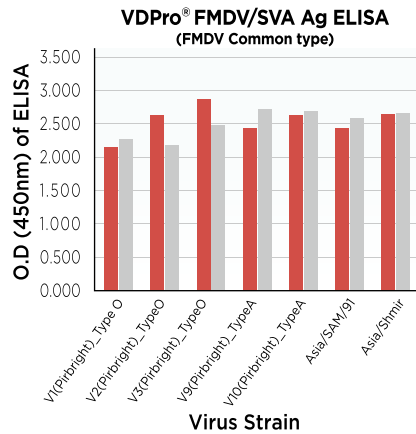
Introduction

- + **Intended use** : Detection of FMDV/SVA and FMDV serotyping (type O, A, Asia1)
- + **Species** : Cattle and pig
- + **Specimens** : Cell culture supernatant, homogenates of epithelium vesicle, saliva and vesicles fluid samples
- + **Method** : Sandwich ELISA
- + **Coated antibody** : FMDV common, type O, A, Asia1 and SVA specific antibodies

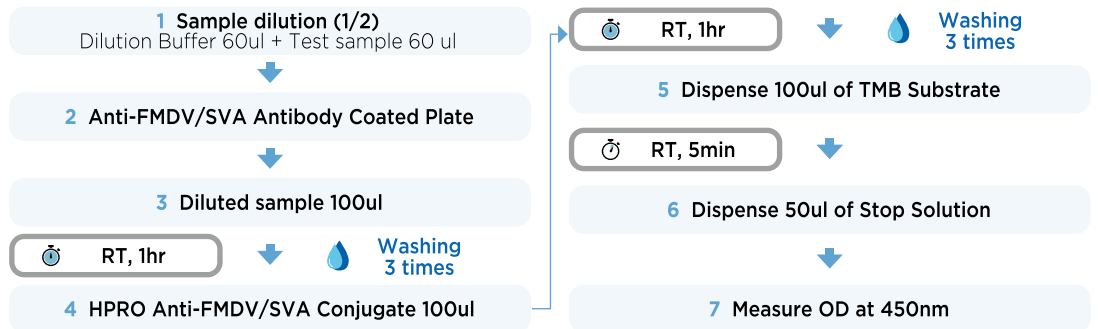


Features

- + Detection of FMDV serotypes (common, type O, A, Asia1) and SVA
- + Differential diagnosis between FMDV and SVA
- + Comparison of commercial ELISA and VDPro® FMDV/SVA Ag ELISA at WOAH FMDV Reference Lab in South Korea



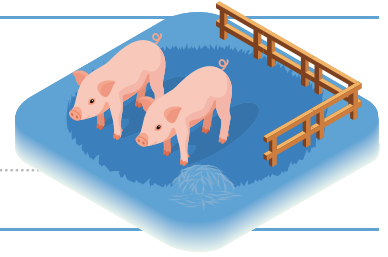
Quick protocol



Order Information

Cat No.	Product Name	Quantity
EM-FMD-06	VDPro® FMDV/SVA Ag ELISA	96 Tests

VDPro® ASFV Ab i-ELISA ver 2.0



Systemic Disease

African Swine Fever

African Swine Fever (ASF) is an infectious disease of domestic and wild pigs of all breeds and ages, caused by African Swine Fever Virus (ASFV). The clinical signs vary from peracute, acute, subacute to chronic, depending on the virulence of the virus. Acute form is characterised by high fever, haemorrhages in the reticuloendothelial system, and a high lethality.

VDPro® ASFV Ab i-ELISA ver 2.0 is designed to detect presence of anti-ASFV antibody in pig serum. The ELISA plate is coated with ASFV recombinant p30 & p22 protein.

Introduction

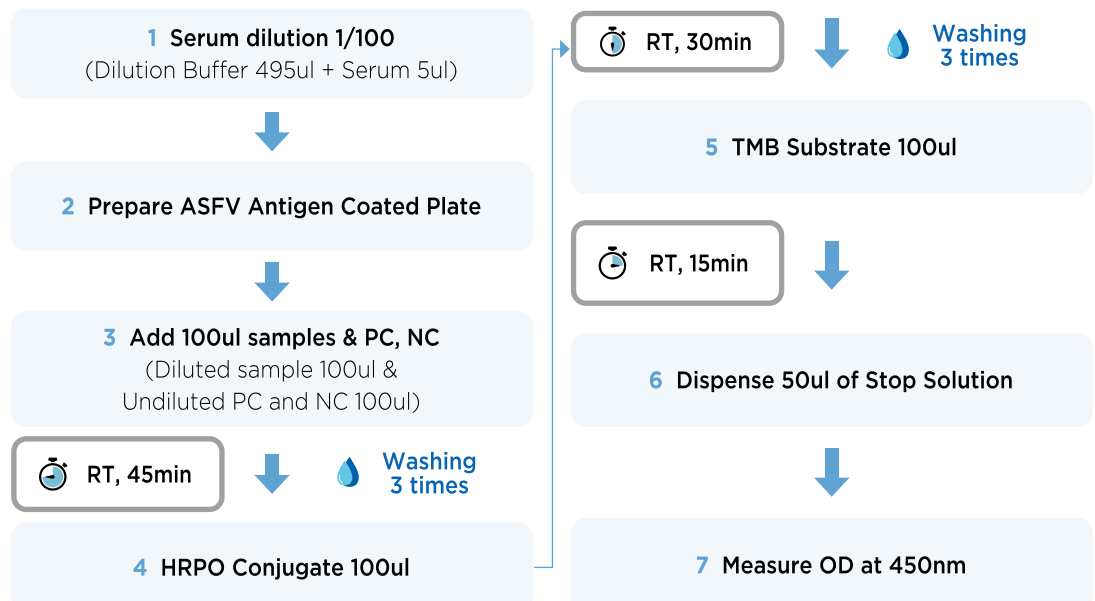
- + **Intended use** : Detection of ASF antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : p30 & p22 recombinant protein



Features

- + Serological test for early detection ASF in pig herd
- + Excellent agreement with the IPT (Indirect Immunoperoxidase Test) reference test
- + High detection ability of antibodies against genotype 2 as well as genotype 1

Quick protocol

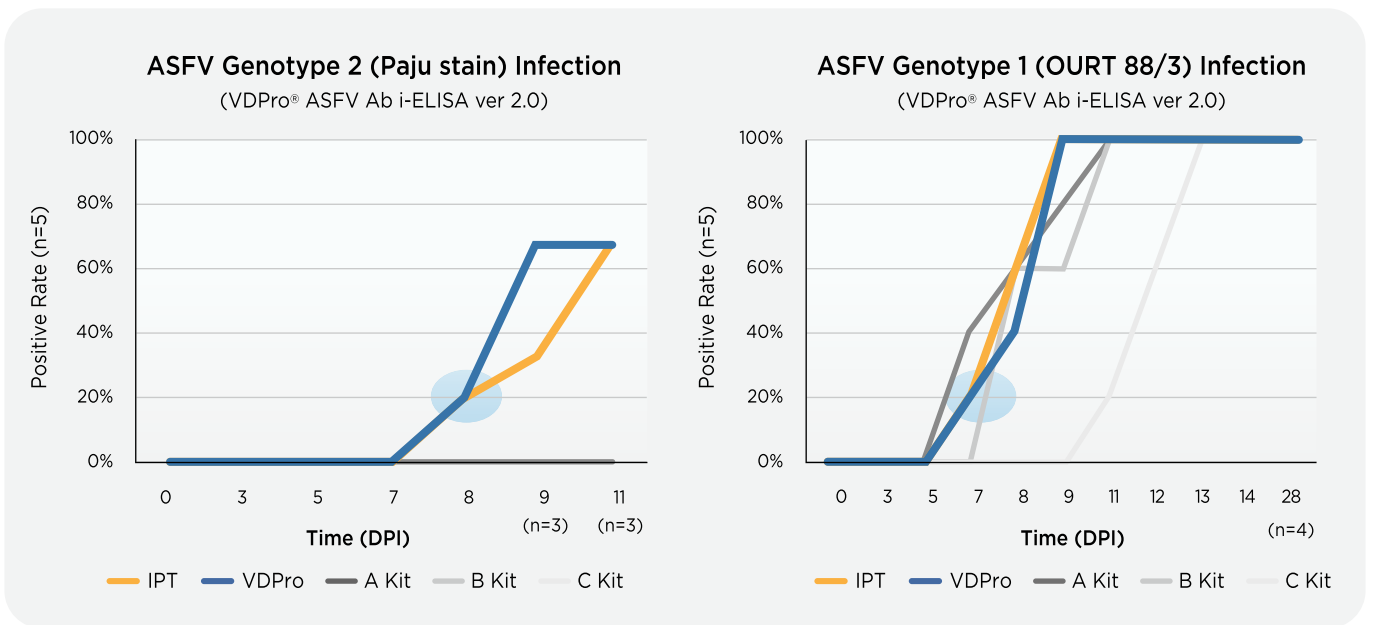


Performance

Excellent agreement with the IPT reference test (91.1%)

* ASFV challenge sera

Strain	Species	No. of sample*	Result	VDPro® ASFV Ab i-ELISA ver 2.0		IPT Result		Agreement rate with IPT
				No. of samples	Sensitivity	No. of samples	Sensitivity	
OURT 88/3 (Genotype 1)	Pig	49	Positive	32	65.3%	33	67.3%	98.0%
			Negative	17		16		
Paju (Genotype 2)	Pig	30	Positive	5	16.7%	9	30.0%	80.0%
			Negative	25		21		



➔ Genotype 2 : Detecting ASFV antibody as early as 8-9 days post infection

➔ Genotype 1 : Detecting ASFV antibody as early as 7-9 days post infection

➔ No detection of all 3 competitors' products

Clinical Specificity : 99.8% (1131/1133)

Country	No. of sample*	VDPro® ASFV Ab i-ELISA ver 2.0	
		No. of negative	Specificity
USA	541	540	99.8%
South Korea	592	591	99.8%

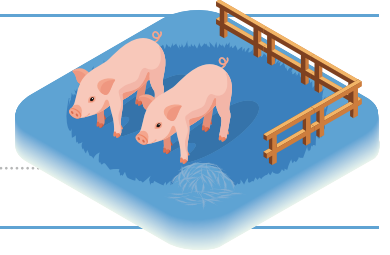
* Pig sera collected from ASF non-outbreak domestic and oversea area

Cross Reactivity : 0% (testing 7 kinds of bacteria and viruses including CSFV)

Order Information

Cat No.	Product Name	Quantity
ES-ASF-05	VDRG® ASFV Ab i-ELISA ver 2.0	192 Tests, 480 Tests

VDPro® CSFV AG ELISA



Systemic Disease

Classical Swine Fever

Classical Swine Fever (CSF) is the first class legal notifiable communicable disease in Korea and a list disease as determined by WOAH. It is highly infectious and also has a high fatality rate in pig. CSF is caused by Classical Swine Fever Virus (CSFV) and can be prevented through vaccination. Antibody and antigen tests should be conducted together for the diagnosis of CSF, and serological surveillance at the vaccinated area is especially crucial.

VDPro® CSFV AG ELISA provides a rapid, simple and specific method for detecting CSFV antigens excluding cross-reaction with other *pestiviruses* such as Bovine biral diarrhea virus (BVDV) and Border disease virus (BDV).

Introduction

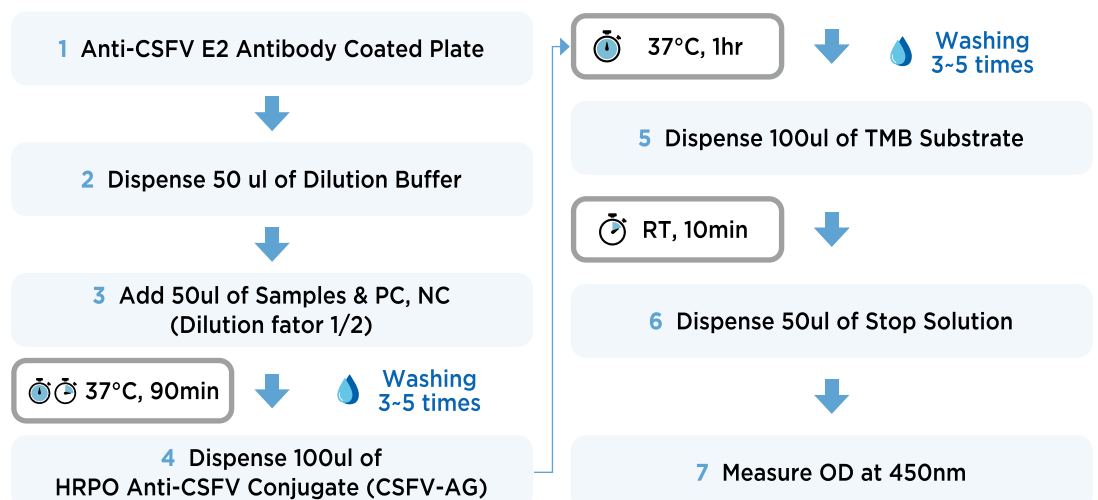
- + **Intended use** : Detection of CSFV antigen
- + **Species** : Pig
- + **Specimens** : Tissues, Leukocyte, Cell culture, Whole Blood
- + **Method** : Sandwich ELISA
- + **Coated antibody** : Anti-CSFV E2 antibody



Features

- + Available regardless of CSFV genotype
- + Excellent correlation with RT-PCR and virus isolation
- + Helps to diagnose quickly with a reagent that can easily process the whole blood sample.
- + This kit does not available discriminate between vaccine strain from field strain.
- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + High reproducibility and accuracy

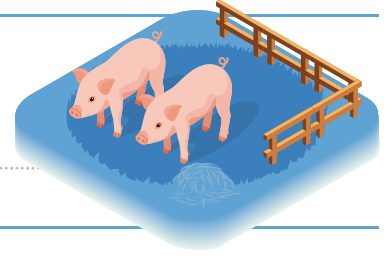
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-CSF-03	VDPro® CSFV AG ELISA	192 Tests

VDPro® CSFV Ab c-ELISA



Systemic Disease

VDPro® CSFV Ab c-ELISA is designed to detect presence of anti-E2 antibody in pig serum.

Introduction

- + **Intended use** : Detection of CSF antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : CSFV E2 (gp55) recombinant protein

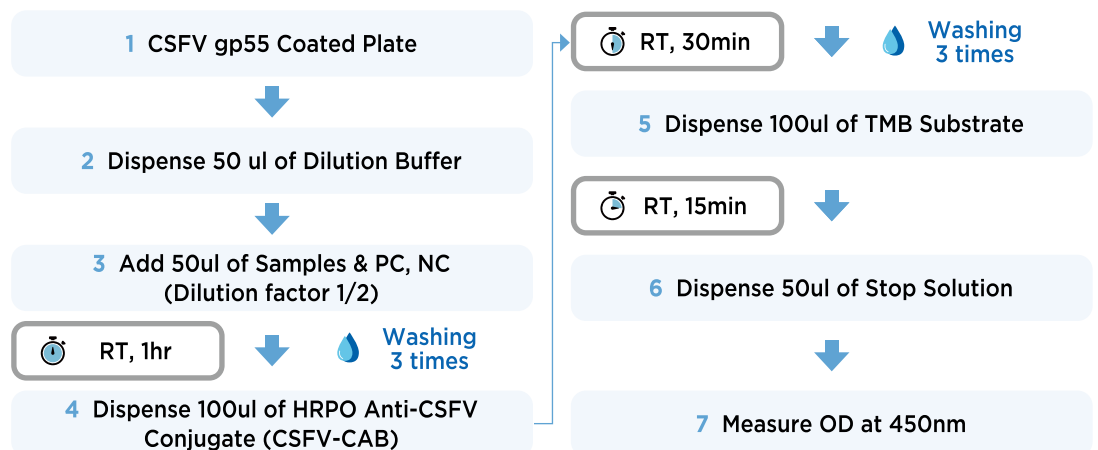


Features

- + Cost savings by using strip plate
- + High reproducibility and accuracy
- + Ready-to-use reagent, easy test
- + Safety by using recombinant antigen
- + DIVA (Differential Infected from Vaccinated Animals) can be conducted in conjunction with VDPro® CSFV Erns Ab b-ELISA or VDPro® BVDV Erns Ab i-ELISA.
- + Offers a rapid, simple and specific method to detect antibodies against CSFV without cross reaction with the antibodies of other *pestiviruses* such as Bovine viral diarrhea virus (BVDV) and Border disease virus (BDV).
- + Excellent correlation with Neutralizing Peroxidase-linked Assay (NPLA) *NPLA is WOAHP prescribed method.

No.	Test	Results
1	Analytical Sensitivity	- LoD : VNT 16 (twice higher than Competitor) - Detect genotype 1, 2, 3 - Detect antibody at 2-3 weeks post-inoculation of CSFV
2	Analytical Specificity	- No cross reaction with anti-serum by other pig infectious diseases (BVDV, ADV, PCV-2, PRRSV)
3	Clinical Sensitivity	Based on VNT (n=627) - Sensitivity : 100% (vs 100% Competitor)
4	Clinical Specificity	Based on VNT (n=644) - Specificity : 99.8% (vs 96.4% Competitor)

Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-CSF-02	VDPro® CSFV Ab c-ELISA	192 Tests, 480 Tests

CSF DIVA system

	1st Diagnosis		2nd Diagnosis
	CSFV Ab c-ELISA	CSFV Erns Ab b-ELISA	BVDV Erns Ab i-ELISA
CSFV field infection	Positive	Positive	Negative
LOM vaccine	Positive	Positive	Negative
E2 subunit marker vaccine	Positive	Negative	Negative
Live marker vaccine (Flc-LOM-BErns)	Positive	Negative	Positive
Control	Negative	Negative	Negative

VDPro® CSFV Erns Ab b-ELISA

VDPro® CSFV Erns Ab b-ELISA is designed to detect presence of anti-CSFV Erns antibody in pig serum.

Introduction

- + **Intended use** : Detection of antibody against CSFV Erns
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : CSFV Erns antigen



Features

- + Marker vaccine test kit
- + DIVA (Differential Infected from Vaccinated Animals) can be conducted in conjunction with VDPro® CSFV AB ELISA or VDPro® CSFV Ab b-ELISA.

VDPro® BVDV Erns Ab i-ELISA

VDPro® BVDV Erns Ab i-ELISA is designed to detect presence of anti-BVDV Erns antibody produced by recombinant CSFV live marker vaccine (CSFV Flc-LOM-BErns) in pig serum.

Introduction

- + **Intended use** : Detection of antibody against BVDV Erns
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : BVDV Erns antigen



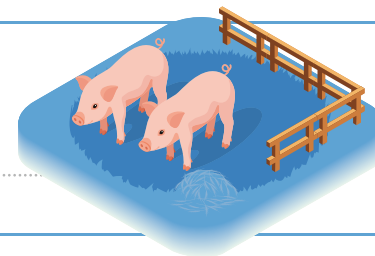
Features

- + CSFV live marker vaccine (Flc-LOM-BErns) test kit

Order Information

Cat No.	Product Name	Quantity
ES-CSF-05	VDPro® CSFV Erns Ab b-ELISA	192 Tests, 480 Tests
EB-BVD-02	VDPro® BVDV Erns Ab i-ELISA	192 Tests, 480 Tests

VDPro® PCV2 AB ELISA



Systemic Disease

Porcine cirocovirus type 2 (PCV2)

Porcine cirocovirus type 2 (PCV2) has been identified as the causal agent of post-weaning multisystemic wasting syndrom (PMWS). PCV is a single-stranded DNA virus, that is nonenveloped with an unsegmented circular genome.

VDPro® PCV2 AB ELISA is antibody ELISA test kit for PCV2. This kit is an indirect ELISA and this serological test may supply the useful information of immunoreactivity level of herds by checking average antibody titer of herds.

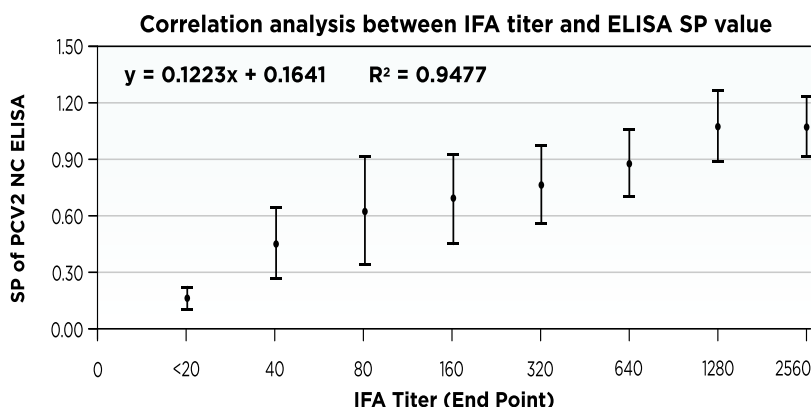
Introduction

- + **Intended use** : Detection of PCV2 antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Principle** : Indirect ELISA
- + **Coated antigen** : PCV2 recombinant protein

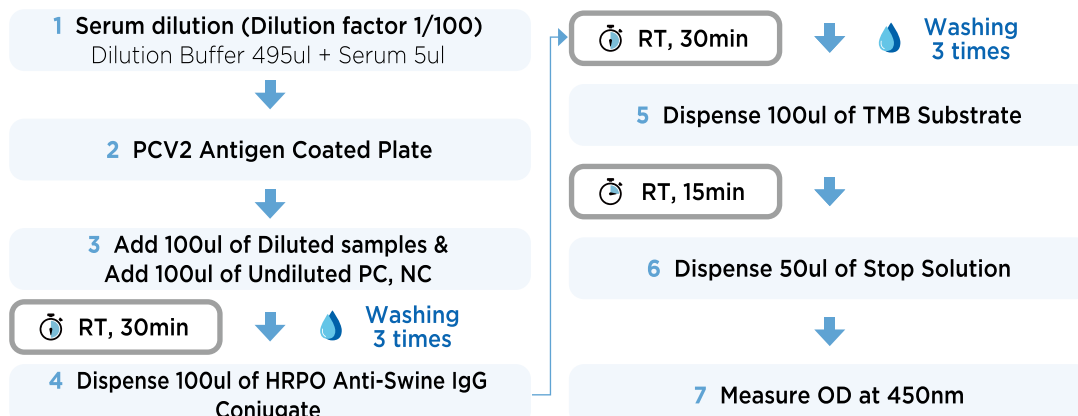


Features

- + Excellent reagent to herd based antibody test
- + Clinical Specificity : 99.4% (152/153) compare to IFA negative sera
- + Limit of Detection (LoD) : IFA 1:40 (Cut-off value 0.4)
- + Good correlation between VDPro® PCV2 AB ELISA and PCV2 IFA titer (n=336)



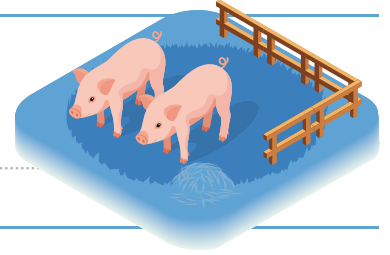
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-PCV-01	VDPro® PCV2 AB ELISA	192 Tests, 480 Tests

VDPro® ADV AB ELISA

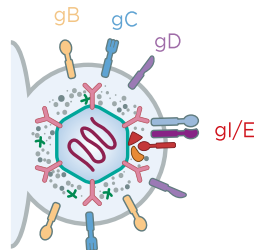


Reproductive Failure Disease

Aujeszky's Disease

Pig Aujeszky's Disease is known as "Pseudorabies" and caused by **Aujeszky's Disease Virus (ADV)**. It belongs to the *alphaherpesvirus* and mainly infects the central nervous system and respiratory systems of animals. Its major host is pig and the recovered pig from ADV infection become carriers. Since vaccine is made of gE deleted virus, the presence of gI (gE) antibody detected by antibody test indicates that gE antibody is from infection but not from vaccination. Antibody and antigen tests should be conducted together for the diagnosis of ADV, and serological surveillance at the vaccinated area is especially crucial.

ADV DIVA system



The wild virus



The vaccine virus

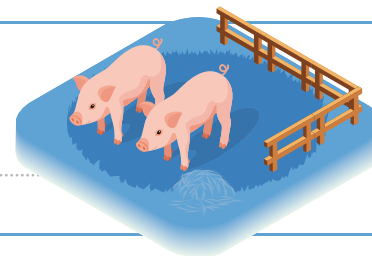
Products Name	Infected	Vaccinated	Unvaccinated
VDPro® ADV AB Screen ELISA (gB)	○	○	X
VDPro® ADV gI AB ELISA	○	X	X

- DIVA (Differential Infected from Vaccinated Animals) can be conducted in conjunction with gI (gE) antibody test.

Order Information

Cat No.	Product Name	Quantity
ES-ADV-01	VDPro® ADV AB Screen ELISA	192 Tests, 480 Tests
ES-ADV-02	VDPro® ADV gI AB ELISA	192 Tests, 480 Tests

VPro® ADV AB Screen ELISA



Reproductive Failure Disease

VPro® ADV AB Screen ELISA is designed to detect presence of anti-ADV gB antibody in pig serum.

Introduction

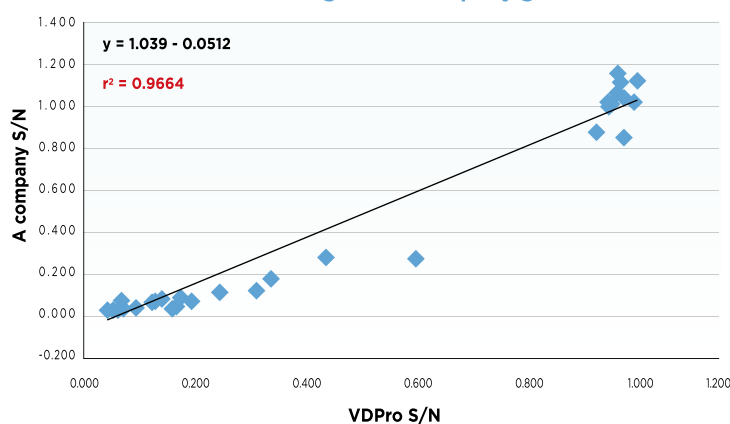
- + **Intended use** : Detection of Aujeszky's disease virus gB antibody
- + **Species** : Pig
- + **Specimens** : Serum or plasma
- + **Method** : Blocking ELISA
- + **Coated antigen** : Purified, inactivated ADV antigen



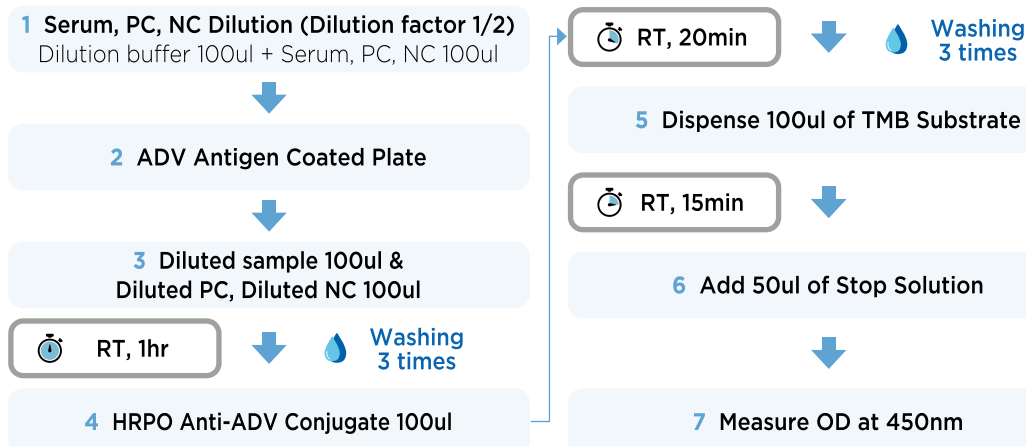
Features

- + This kit enables to detect from vaccination or infection.
- + It is used for qualitative measurements of neutralizing antibodies against ADV.
- + High concordance rate with virus neutralizing antibody titer

VPro gB vs A company gB



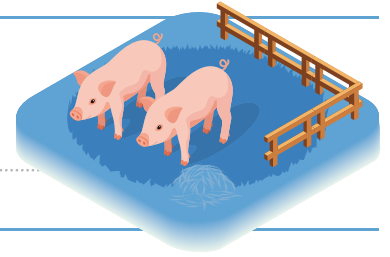
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-ADV-01	VPro® ADV AB Screen ELISA	192 Tests, 480 Tests

VDPro® ADV gI AB ELISA



Reproductive Failure Disease

VDPro® ADV gI AB ELISA is designed to detect presence of anti-ADV gI (gE) antibody in pig serum.

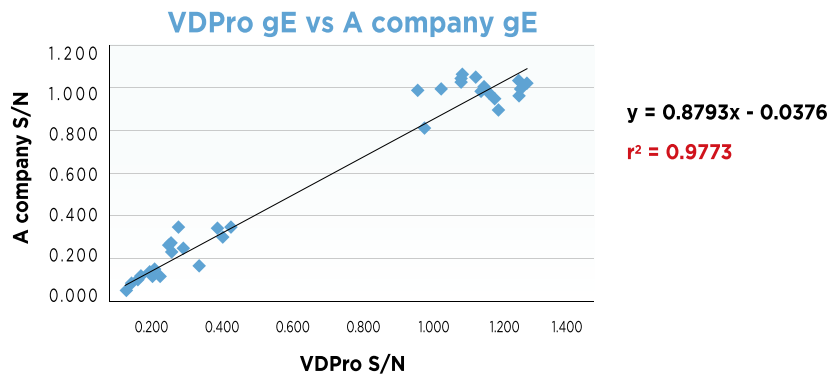
Introduction

- + **Intended use** : Detection of Aujeszky's disease virus gI (gE) antibody
- + **Species** : Pig
- + **Specimens** : Serum or plasma
- + **Method** : Blocking ELISA
- + **Coated antigen** : Purified, inactivated ADV antigen

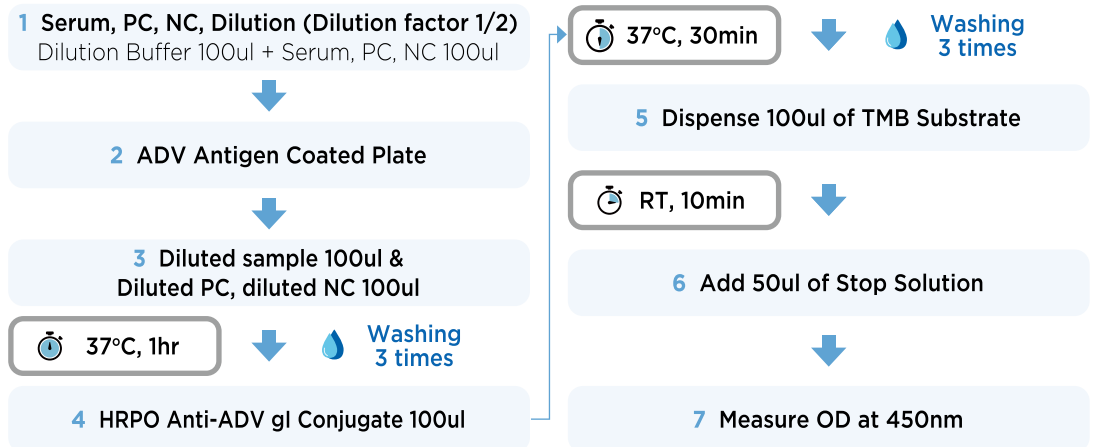


Features

- + High correlation with Virus Neutralization Test (VNT)
- + Enables to differentiate the antibodies resulted from vaccination or infection.
- + It provides a rapid, simple and specific method for differentiating the antibodies against ADV infection and gI (gE) deleted vaccination.
- + High reproducibility and accuracy
- + Clinical Sensitivity : 96% (1173/1222) vs VNT positive serum
- + Clinical Specificity : 99.4% (489/492) vs VNT negative serum



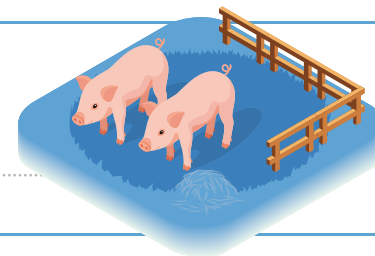
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-ADV-02	VDPro® ADV gI AB ELISA	192 Tests, 480 Tests

VDPro® Japanese Encephalitis AB ELISA



Reproductive Failure Disease

Japanese Encephalitis

Japanese encephalitis virus (JEV) is a Culex mosquito-borne pathogen, zoonotic flavivirus causing encephalitis in humans and reproductive disorders such as abortion and stillbirth in pig. The virus in endemic areas is persisting in nature through a cycle of transmission involving mosquitoes, domestic and wild birds, domestic pigs, and humans. Pig is the main natural amplifier and reservoir of JEV. World Health Organization (WHO) recommends strong prevention and control program in all regions where the disease is a public health concern, utilizing efficient surveillance tools and reporting mechanisms (WHO Fact Sheet No 386, 2015).

VDPro® Japanese Encephalitis AB ELISA can be a surveillance tool that was designed to detect JEV-specific antibodies in pig serum as an evidence of infection or vaccination.

Introduction

- + **Intended use** : Detection of anti-JE porcine antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : Purified, inactivated JEV antigen

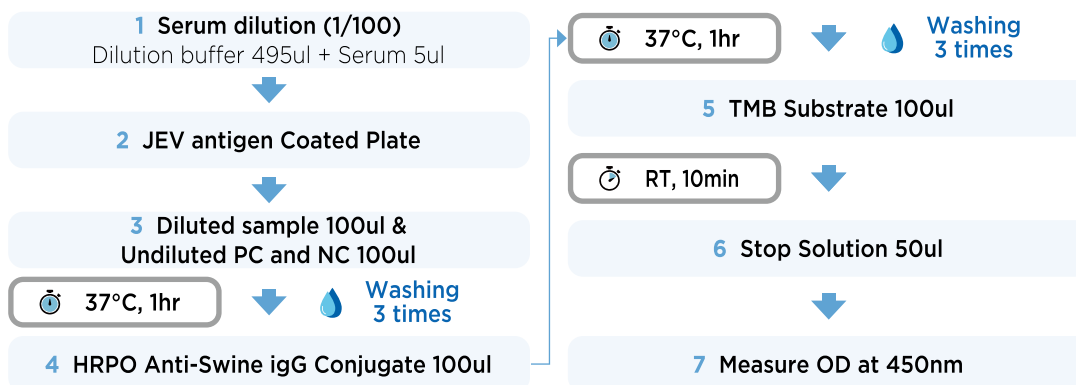


Features

- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + High reproducibility and high accuracy in a short reaction time
- + Japanese Encephalitis WOA Reference Laboratory approved

No.	Test	Results
1	Analytical Sensitivity	- 1:10 at HI - 1:10 at PRNT - 1:8 at SNT
2	Analytical Specificity	No cross reaction with other pig pathogens (PPV, PRRSV, EMCV, ADV etc.)
3	Reproducibility	- Lot to lot : $r^2 = 0.99$ - Well to well : Less than 3.5% CV - Inter laboratory : Higher than 0.99 ²
4	Clinical Sensitivity	- 94.0% vs HI - 98.7% vs PRNT - 98.7% vs SNT
5	Clinical Specificity	- 95.3% vs HI - 95.0% vs PRNT - 95.0% vs SNT

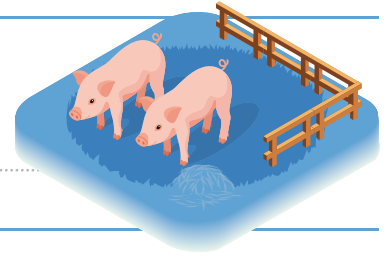
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-JEV-01	VDPro® Japanese Encephalitis AB ELISA	192 Tests, 480 Tests

VDPro® APP2 AB ELISA



Respiratory Disease

Actinobacillus pleuropneumoniae serotype 2

***Actinobacillus pleuropneumoniae* (APP)** was found to be the causative agent for up to 20% of all bacterial pneumonia cases in pig.

VDPro® APP2 AB ELISA is an indirect enzyme-linked immunosorbent assay for the detection of antibodies against *Actinobacillus pleuropneumoniae* serotype 2 (APP2) in pig serum samples.

Introduction

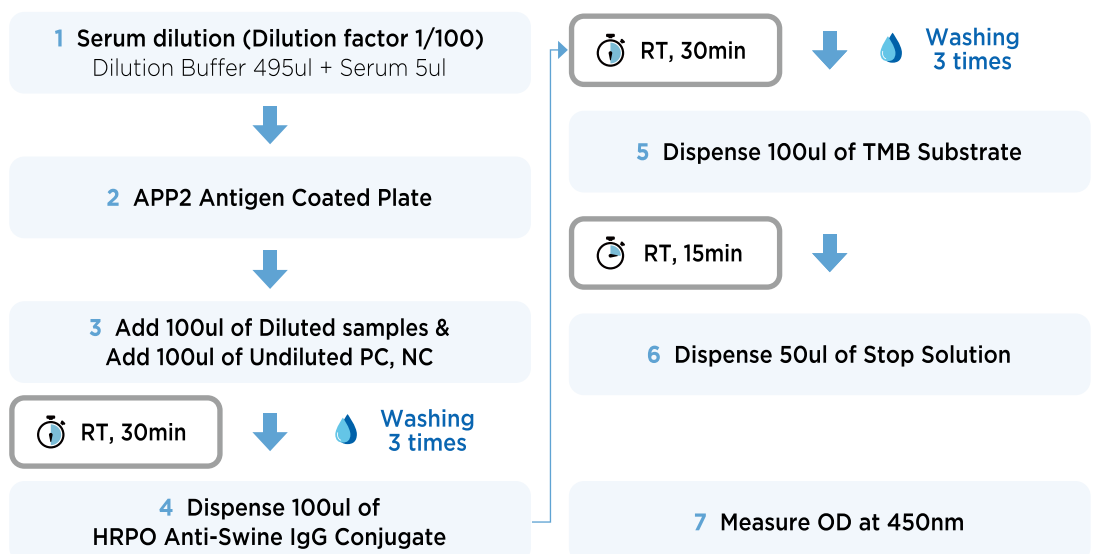
- + **Intended use** : Detection of anti-APP2 antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : APP2 OMP (membrane protein) antigen



Features

- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + High reproducibility and high accuracy in a short reaction time
- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after APP2 vaccination in pig herds.

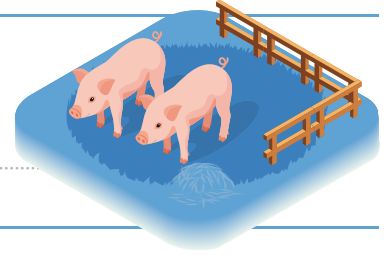
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-AP2-01	VDPro® APP2 AB ELISA	192 Tests, 480 Tests

VDPro® APP5 AB ELISA



Respiratory Disease

Actinobacillus pleuropneumoniae serotype 5

***Actinobacillus pleuropneumoniae* (APP)** was found to be the causative agent for up to 20% of all bacterial pneumonia cases in pig.

VDPro® APP5 AB ELISA is an indirect enzyme-linked immunosorbent assay for the detection of antibodies against *Actinobacillus pleuropneumoniae* serotype 5 (APP5), in pig serum samples.

Introduction

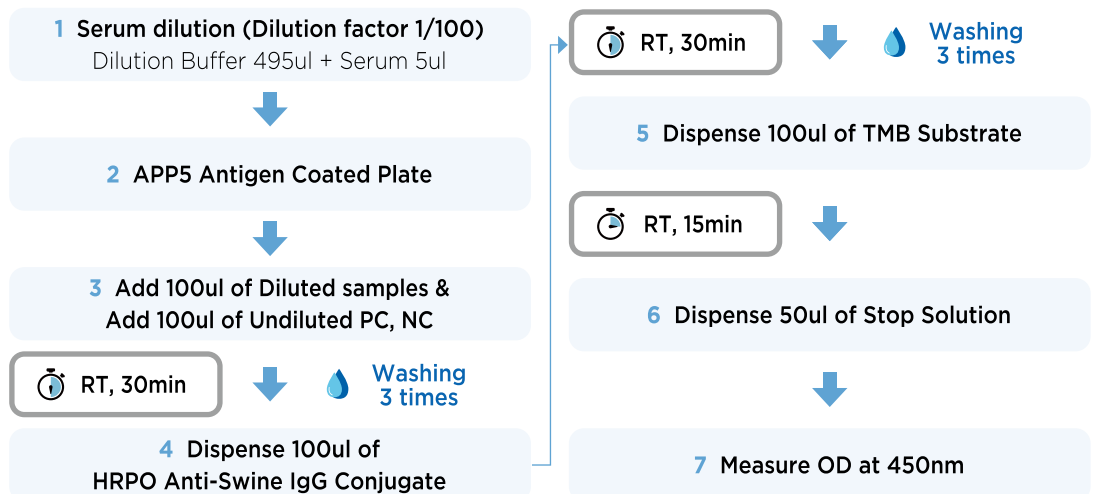
- + **Intended use** : Detection of anti-APP5 antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : APP5 OMP (membrane protein) antigen



Features

- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + High reproducibility and high accuracy in a short reaction time
- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after APP5 vaccination in pig herds.

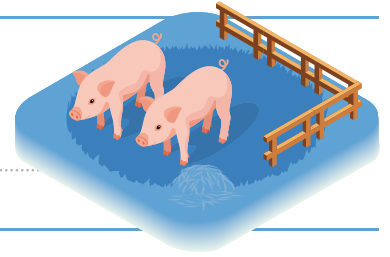
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-AP5-01	VDPro® APP5 AB ELISA	192 Tests, 480 Tests

VDPro® HP AB ELISA



Reproductive Failure Disease

Haemophilus Parasuis

***Haemophilus parasuis* (HP)** was found to be the causative agent for Glasser's Disease, which characterized by various combinations of meningoencephalitis, polyserositis and polyarthritis as well as a contributor to bacterial pneumonia in pig.

VDPro® HP AB ELISA is based on recombinant antigen from HP and an effective tool to screen for infections and immunity levels through monitoring average antibody levels after HP vaccination in pig herds.

Introduction

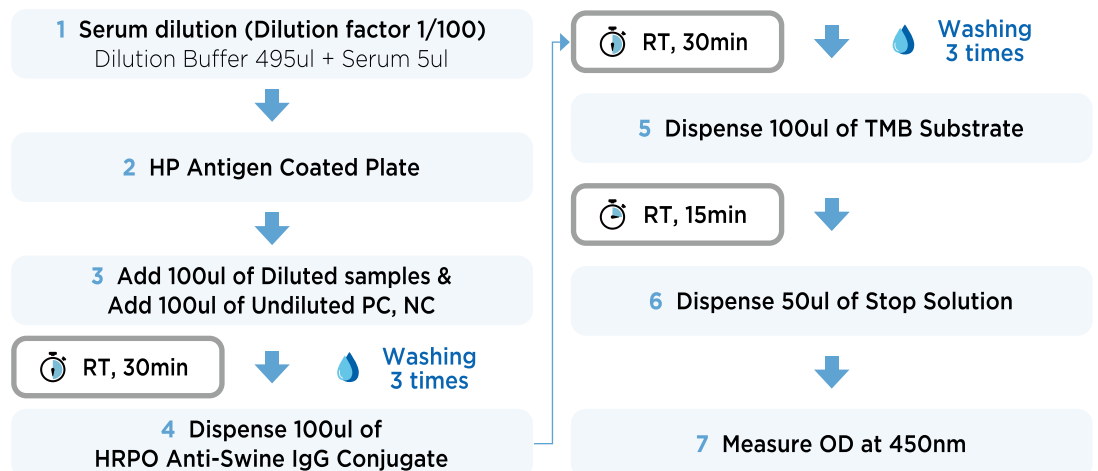
- + **Intended use** : Detection of anti-HP antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : HP recombinant protein



Features

- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + High reproducibility and high accuracy in a short reaction time
- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after HP vaccination in pig herds.

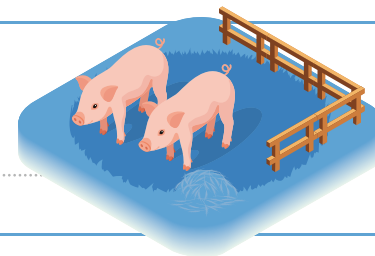
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-HPA-01	VDPro® HP AB ELISA	192 Tests, 480 Tests

VDPro® MH AB ELISA



Respiratory Disease

Mycoplasma hyopneumoniae

***Mycoplasma Hyopneumoniae* (MH)** is a species of bacteria known to cause pig enzootic pneumonia, a highly contagious and chronic disease affecting pig.

VDPro® MH AB ELISA is an indirect enzyme-linked immunosorbent assay for the detection of antibodies against *Mycoplasma hyopneumoniae* (MH) in pig serum samples.

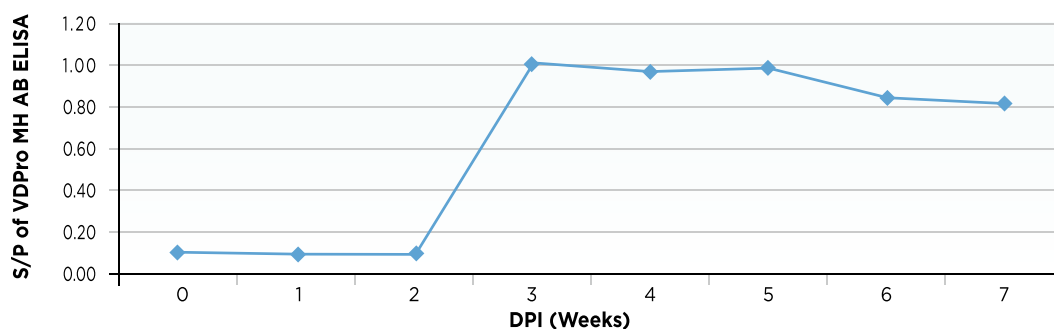
Introduction

- + **Intended use** : Detection of anti-MH antibody
- + **Species** : Pig
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : MH recombinant protein

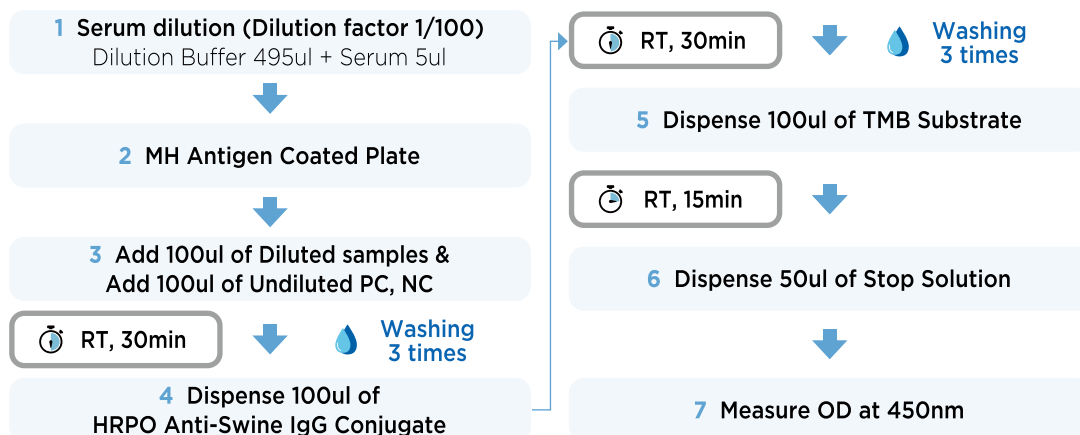


Features

- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after MH vaccination in pig herds.
- + Reproducibility : Lot to lot : $r^2 = 0.99$, CV% is less than 5%
- + Clinical Sensitivity : 93.3% (140/150) vs other company ELISA positive sera
- + Clinical Specificity : 92.6% (139/150) vs other company ELISA negative sera
91.2% (73/80) vs SPF pig negative sera
- + Sero-conversion of MH vaccination



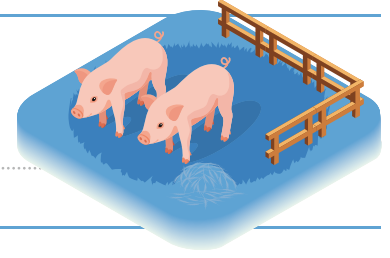
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-MHY-01	VDPro® MH AB ELISA	192 Tests, 480 Tests

VDPro® PRRSV AB ELISA



Reproductive Failure Disease & Respiratory Disease

Porcine Reproductive Respiratory Syndrome

Porcine Reproductive and Respiratory Syndrome (PRRS) is a disease characterized by reproductive disorder in pregnant pig, and respiratory disease in weaning pig and growing pig. **VDPro® PRRSV AB ELISA** is a diagnostic kit for detection of antibodies generated by vaccination or infection of PRRSV in porcine serum and plasma samples. The test is useful for detecting antibodies against both PRRSV types (type 1 - European, type 2 - American) and suitable for herd profile.

Introduction

- + **Intended use** : Detection of anti-PRRSV antibody
- + **Species** : Pig
- + **Specimens** : Serum and plasma
- + **Method** : Indirect ELISA
- + **Coated antigen** : PRRSV recombinant protein



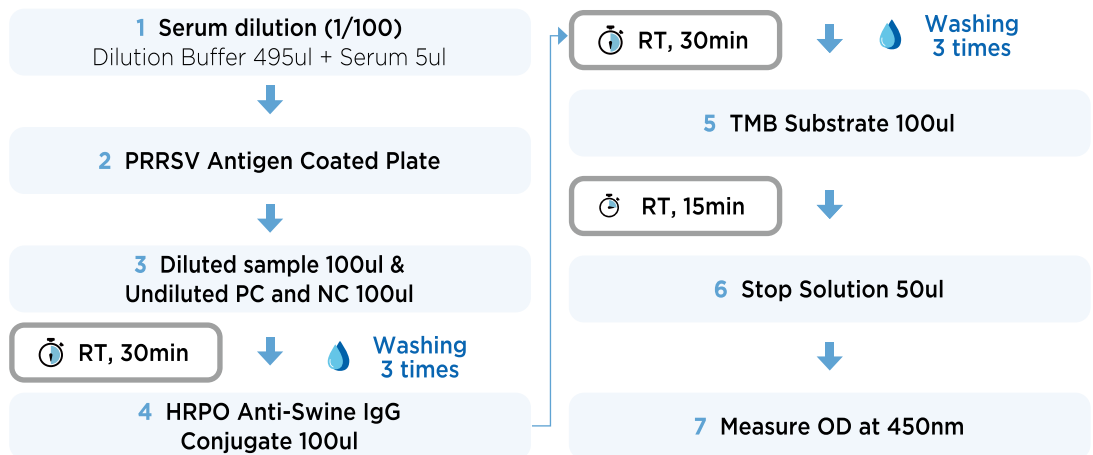
Features

- + Meet the examination criteria of NVSL Proficiency test
- + Can detect all antibodies against NA or EU type PRRSV
- + Based on antibody profiles, vaccination program can be designed
- + Highly similar S/P ratio results compare to competitor's product
- + High correlation (with IFA) : $r^2 = 0.96$
- + Clinical Sensitivity : 93.3 (125/134) compare to IFA positive serum
- + Clinical Specificity : 97.4% (114/117) compare to IFA negative serum

Group	No. Sample	Result of VDPro PRRSV AB ELISA						
		#P	#N	% NEG	Mean OD	Mean SP	Max SP	Min SP
Field	97	2	95	97.9	0.169	0.09	0.69	-0.18
Minipig	20	1	19	95.0	0.128	0.01	0.46	-0.16
Total	117	3	114	97.4	0.162	0.08	0.69	-0.18

#P : No of positive, #N : No of Negative, % NEG : Negative rate, Max: Maximum, Min : Minimum

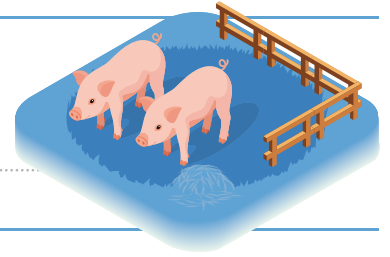
Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-PRR-03	VDPro® PRRSV AB ELISA	192 Tests, 480 Tests

VDPro® JEV Ab b-ELISA



Reproductive Failure Disease

Japanese Encephalitis

Japanese encephalitis (JE) was found to be the causative agent for Glasser's Disease, which characterized by various combinations of meningoencephalitis, polyserositis and polyarthritis as well as a contributor to bacterial pneumonia in pig and horse.

VDPro® JEV Ab b-ELISA can be a surveillance tool that was designed to detect JEV-specific antibodies in pig and horse serum.

Introduction

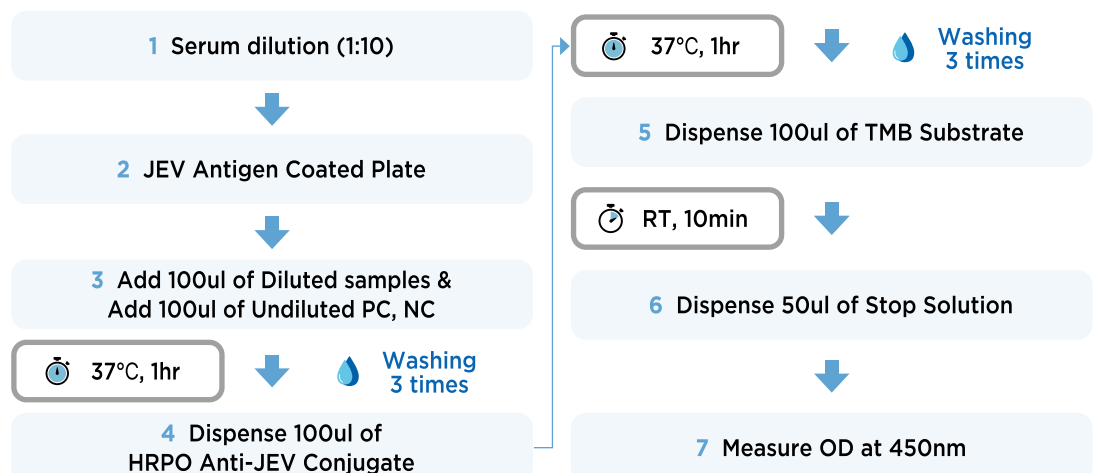
- + **Intended use** : Detection of anti-Japanese encephalitis antibody
- + **Species** : Pig, Horse
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : Purified JEV antigen



Features

- + Clinical sensitivity: Pig - 100% (105/105), Horse - 97.8% (90/92)
- + Clinical specificity: Pig - 100% (105/105), Horse - 92.2% (71/77)
- + No cross-reactivity with pig and horse viral pathogens (CSFV, PRRSV, SIV, WNV, EIV)
- + Ready-to-use reagent, easy test
- + Cost savings by using strip plate
- + Color coded buffer system

Quick protocol



Order Information

Cat No.	Product Name	Quantity
ES-JEV-02	VDPro® JEV Ab b-ELISA	192 Tests, 480 Tests

VDPro® AIV AB ELISA



Avian Influenza

Avian Influenza Virus (AIV) is a disease caused by poultry, and the mortality rates varies depending on the pathogenicity. In the case of Highly Pathogenic Avian Influenza (HPAI), massive death occurs. Respiratory symptoms and neurological symptoms, decreased egg production in the laying hens, and symptoms of poor quality of the eggs, resulting in enormous economic damage.

VDPro® AIV AB ELISA is designed to detect presence of antibodies against AIV in chicken serum.

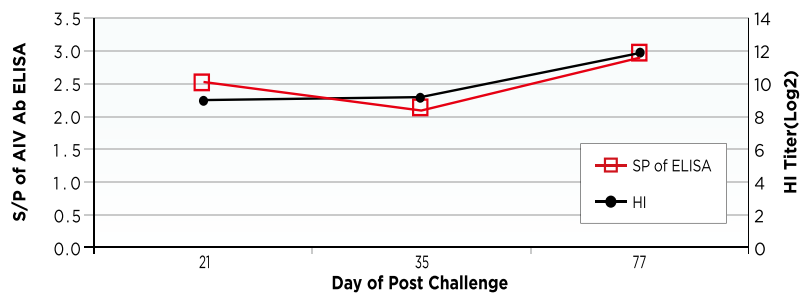
Introduction

- + **Intended use** : Detection of antibody against AIV
- + **Species** : Chicken
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : AIV NP (nucleoprotein) recombinant protein

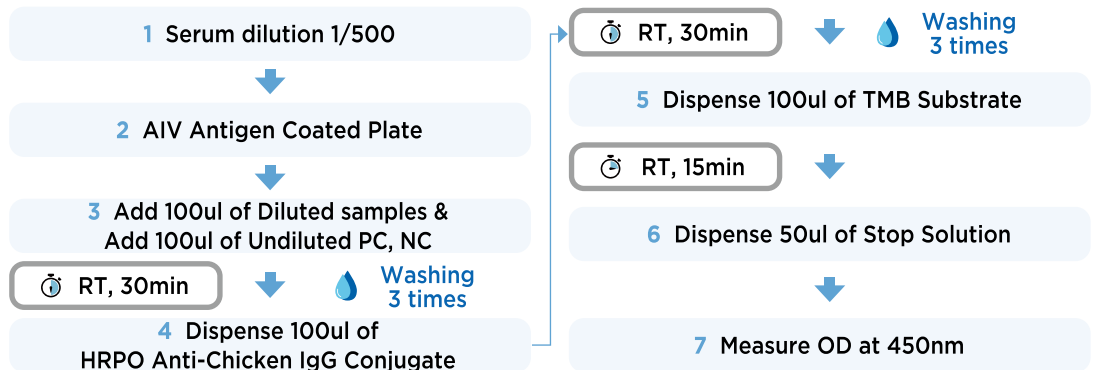


Features

- + High correlation with Hemagglutination-inhibition (HI) antibody test
- + Rapid, simple and specific method for detecting antibodies against AIV.
- + No cross reaction with other avian diseases (IBV, IBDV, MG, MS, NDV, ILT, REO< EDSV, MDV)
- + Clinical sensitivity : 100% (403/403) vs HI test positive samples
 - * LPAIV (H9N2) vaccinated Layer Farm, 100% (35/35) vs HI test positive samples
 - * LPAIV (H9N2) vaccinated SPF Farm
- + Clinical specificity : 100% (115/115) vs HI test negative samples
 - *AIV antibody negative one-day-chicken Farm, 99.6% (249/250) vs HI test negative samples
 - *AIV antibody negative Broiler Farm, 99.2% (118/119) vs HI test negative samples
 - *AIV antibody negative Layer Farm
- + Limit of Detection (LoD) : HI titer $2^{1.93}$ *WOAH positive criteria HI titer 2^4



Quick protocol



Order Information

Cat No.	Product Name	Quantity
EP-AIV-01	VDPro® AIV AB ELISA	192 Tests, 480 Tests

VDPro® IBDV AB ELISA



Infectious Bursal Disease

Infectious Bursal Disease (IBD), also known as Gumboro disease, infectious bursitis and infectious avian nephrosis, is a highly contagious disease of chicks and turkeys caused by infectious bursal disease virus (IBDV). The incubation period of IBDV is very short. After an incubation period of 2-4 days, young chickens show symptoms of apathy and distress, and death may follow 1-3 days later. The economic impact of IBD in poultry industry is serious.

VDPro® IBDV AB ELISA is designed to detect presence of antibodies against IBDV in chicken serum.

Introduction

- + **Intended use** : Detection of anti-IBD antibody
- + **Species** : Chicken
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : IBDV VP2 recombinant protein

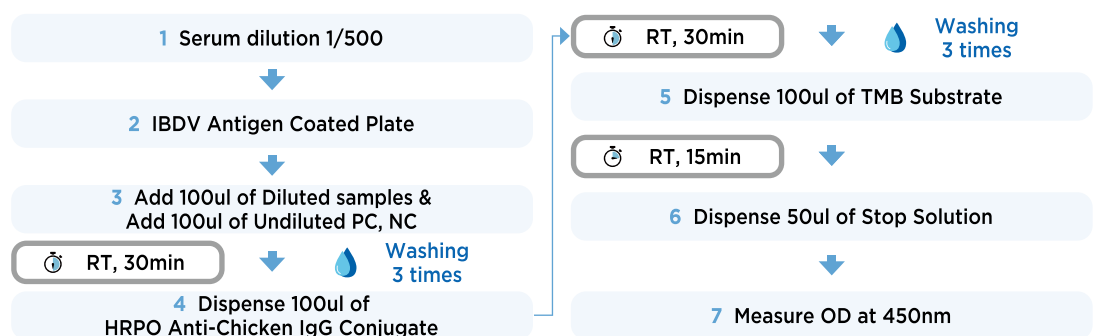


Features

- + Antibody monitoring after vaccination.
- + High correlation with Virus Neutralization tests (VNT)
- + Qualitative measurements of neutralizing antibodies against IBDV
- + Enables to differentiate the antibodies resulted from vaccination or infection.
- + The sensitivity using international standard sera meets to WOA standard.

No.	Test	Results
1	Analytical Sensitivity	- SPAFAS standard and NVRQS positive serum : 100% sensitivity - AGID standard reagent positive serum (South Korea) : 100% sensitivity - Vaccination serum : 100% sensitivity - Maternal antibody : 100% sensitivity (1-15 day-chicken) - Correlation with VN test (WOAH standards) : $r^2 = 0.92$, LoD = SNT 3.38
2	Analytical Specificity	- Cross-reactivity with other disease : 100% specificity (IBV, MG, MS, AIV, NDV, ILT, REO, EDS, MDV) - SPF chicken negative serum : 100% specificity
3	Reproducibility	- Lot to lot : $r^2 = 0.9$ - Well to well : Less than 6% CV
4	Clinical Sensitivity	- One-day chicken Maternal antibody : 100% sensitivity - Broiler : 81.5% sensitivity - Layer : 100% sensitivity
5	Comparison with competition	- Sensitivity and Specificity based on Competition : 100% - Correlation : $r^2 = 0.864$

Quick protocol



Order Information

Cat No.	Product Name	Quantity
EP-IBD-01	VDPro® IBDV AB ELISA	192 Tests, 480 Tests

VDPro® IBV AB ELISA



Avian Infectious Bronchitis

Infectious Bronchitis (IB) is a viral disease in Chicken caused by avian coronavirus. It is a highly infectious avian pathogen that affects the respiratory tract, gut, kidney and reproductive systems of chickens. The incubation period of IBV is 24-48 hours. All ages of chickens are susceptible, especially chicks.

VDPro® IBV AB ELISA is designed to detect presence of antibodies against IBV in chicken serum.

Introduction

- + **Intended use** : Detection of anti-IBV
- + **Species** : Chicken
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : Purified, inactivated IBV antigen

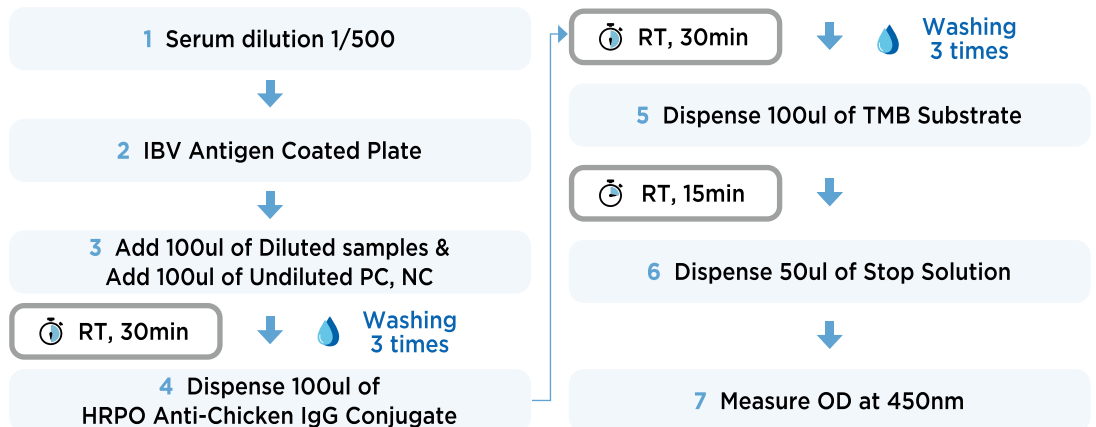


Features

- + Antibody monitoring after vaccination.
- + High correlation with HI titer in IBV vaccinated or infected chickens.

No.	Test	Results
1	Analytical Sensitivity	- SPAFAS standard and NVRQS positive serum : 100% sensitivity - HI standard reagent positive serum (South Korea) : 100% sensitivity - Vaccination serum : 97.06% sensitivity - Maternal antibody : 98.1% sensitivity (1-15 day-chicken) - Correlation with HI test : $r^2 = 0.77$, LoD = HI titer 20.7
2	Analytical Specificity	- Cross-reactivity with other disease : 100% specificity (IBV, MG, MS, AIV, NDV, ILT, REO, EDS, MDV, NCS) - SPF chicken negative serum : 100% specificity
3	Reproducibility	- Lot to lot : $r^2 = 0.97$ - Well to well : Less than 10% CV
4	Clinical Sensitivity	- One-day chicken Maternal antibody : 98.1% sensitivity - Broiler : 97.4% sensitivity - Layer : 97.9% sensitivity
5	Comparison with competition	- Sensitivity and Specificity based on Competitor : 100% each - Correlation : $r^2 = 0.890$

Quick protocol



Order Information

Cat No.	Product Name	Quantity
EP-IBV-01	VDPro® IBV AB ELISA	192 Tests, 480 Tests

VPro® MS AB ELISA



Mycoplasma Synoviae(MS)

The bacteria ***Mycoplasma Synoviae (MS)*** is a member of the *mycoplasma* genus. It causes respiratory disease or joint disorders of birds. It is found throughout the world and infection may be referred to as infectious synovitis, avian mycoplasmosis, infectious sinusitis and mycoplasma arthritis. The disease makes economic loss on poultry industry, because MS infection can cause decrease of egg production and quality. The disease is most commonly seen in chickens, and transmission occurs both vertically and horizontally.

VPro® MS AB ELISA is designed to detect presence of antibodies against MS in chicken serum.

Introduction

- + **Intended use** : Detection of anti-MS antibody
- + **Species** : Chicken
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : Purified, inactivated MS antigen

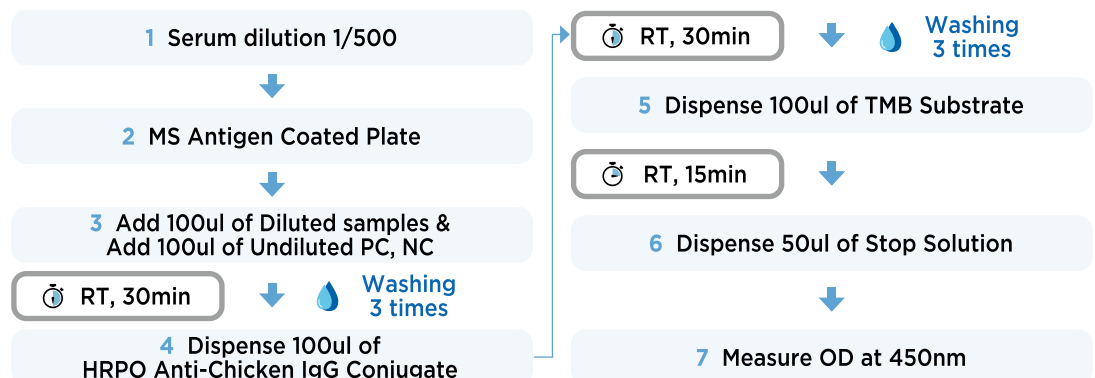


Features

- + It shows high correlation rate with HI titer in MS infected chickens.
- + It is an indirect ELISA using recombinant protein that is used to check antibodies produced by the MS infection.

No.	Test	Results
1	Analytical Sensitivity	- SPAFAS standard positive serum : HI 1:40 - Correlation with HI test (WOAH standards) : $r^2 = 0.734$, LoD = HI 2.58 - Reactivity with MG+/MS+ positive serum : more than 96%
2	Analytical Specificity	- No Cross-reactivity with other disease : 100% specificity (IBV, IBDV, AIV, NDV, ILT, REO, EDS, MDV, SE, SG) - SPF chicken negative serum : 88/88 negative, 100% specificity - Cross-reactivity with MG : 89.5% specificity
3	Reproducibility	- Lot to lot : $r^2 = 0.997$ - Well to well : Less than 8% CV
4	Clinical Sensitivity	- One-day chicken maternal antibody : 100% sensitivity - Broiler : 81.5% sensitivity - Layer : 100% sensitivity
5	Comparison with competition	- Sensitivity and specificity based on competition : 93.8%, 87.5% - Correlation : $r^2 = 0.816$

Quick protocol



Order Information

Cat No.	Product Name	Quantity
EP-MSY-01	VPro® MS AB ELISA	192 Tests, 480 Tests

VDPro® NDV AB ELISA



Newcastle Disease

The causal agent, **Newcastle Disease Virus (NDV)**, is a variant of avian orthoavulavirus 1, a negative-sense, single-stranded RNA virus. Transmission occurs by exposure to faecal and other excretions from infected birds, and through contact with contaminated food, water, equipment, and clothing. Signs of infection with NDV vary greatly depending on factors such as the strain of virus and genotypes, age and species of the host.

VDPro® NDV AB ELISA is designed to detect presence of antibodies against NDV in chicken serum using indirect ELISA.

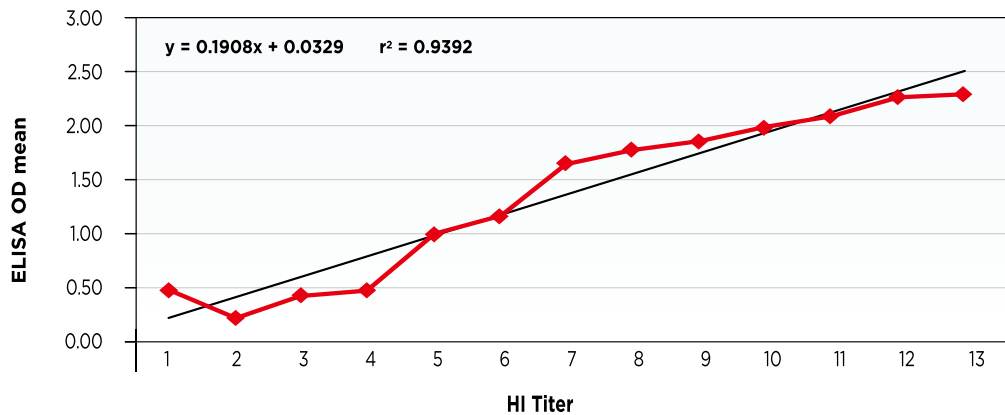
Introduction

- + **Intended use** : Detection of anti-ND antibody
- + **Species** : Chicken
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : Purified, inactivated NDV antigen

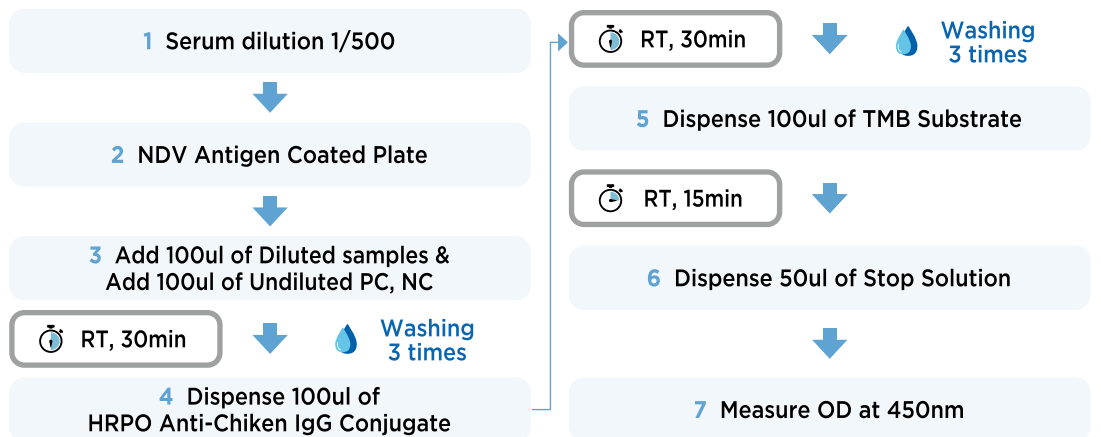


Features

- + Antibody monitoring after vaccination.
- + A rapid, simple and specific method for detecting antibodies against NDV.
- + High correlation with HI titer

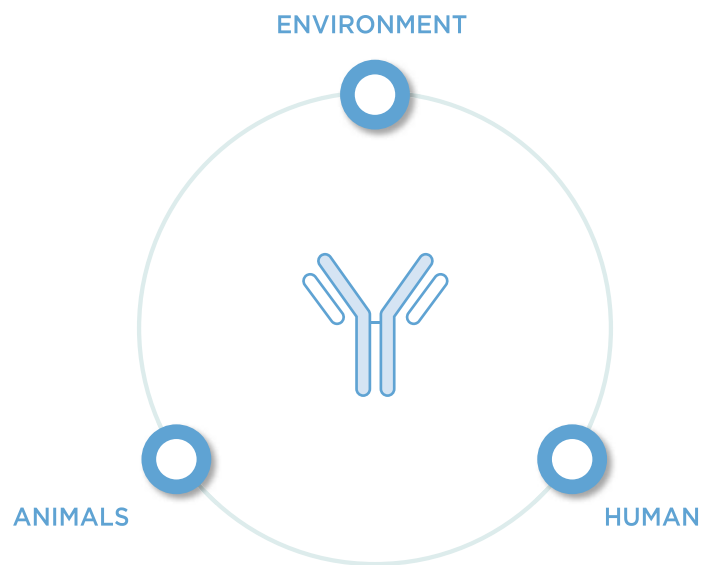


Quick protocol



Order Information

Cat No.	Product Name	Quantity
EP-NDV-01	VDPro® NDV AB ELISA	192 Tests, 480 Tests



"For One Health"