

# VDPPro<sup>®</sup> ELISA

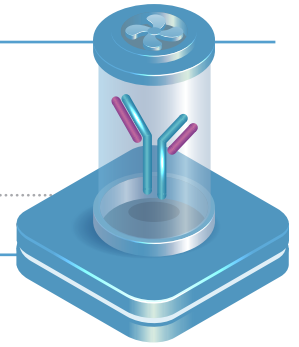
Product Catalogue



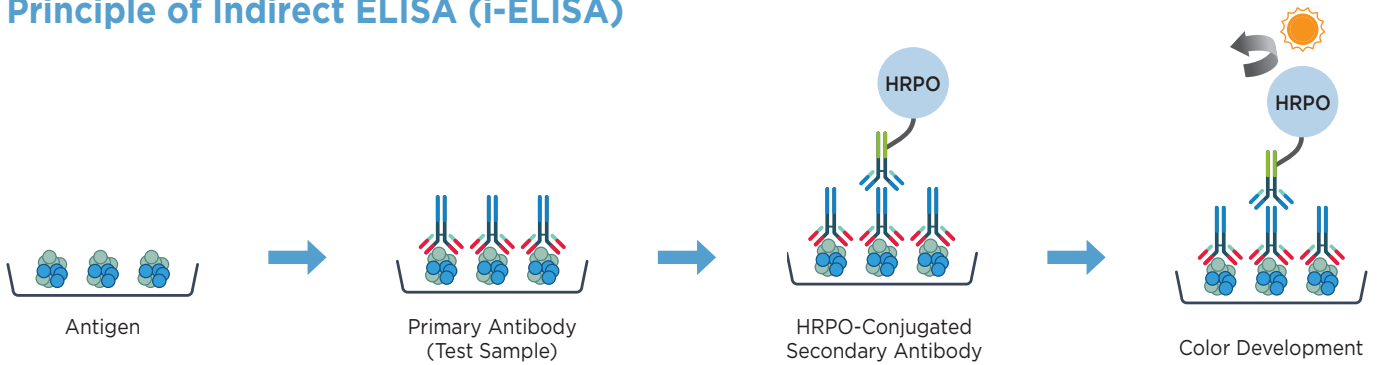
Let's contribute to human and animal health with diagnostic business

# Types of ELISA

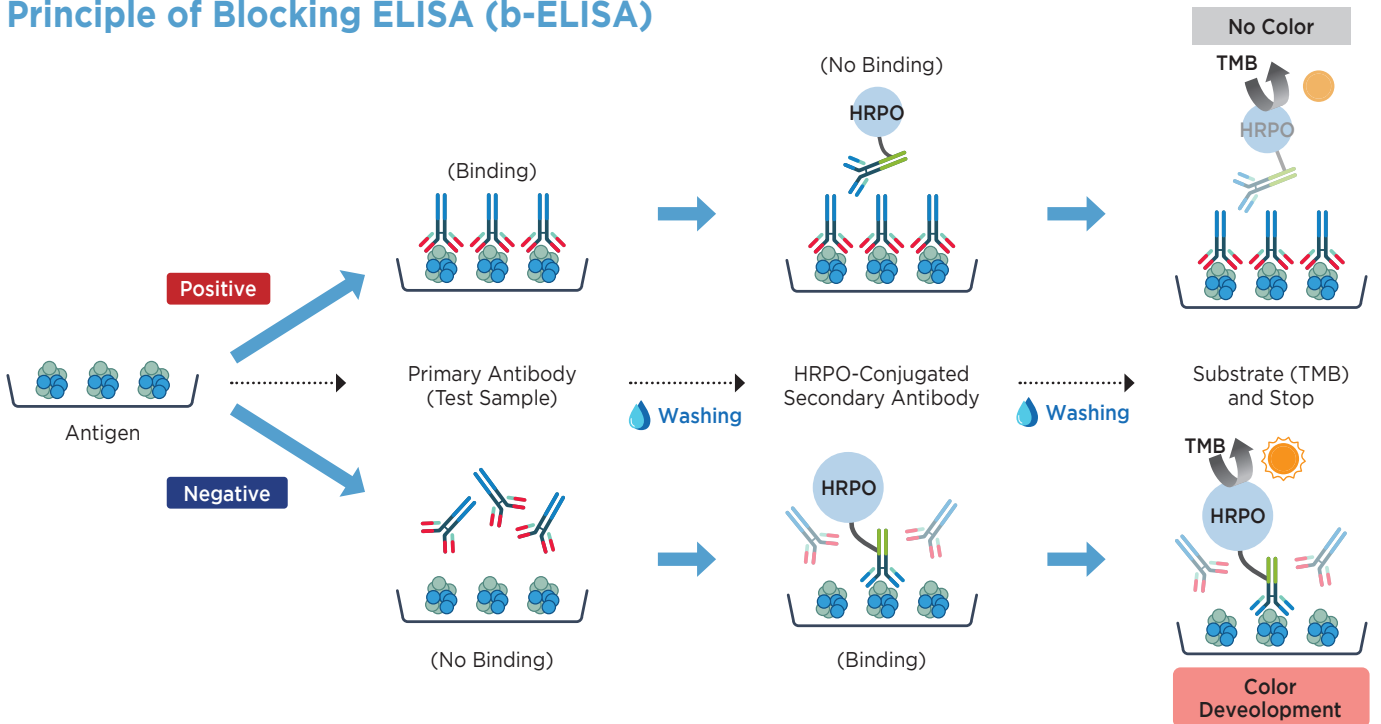
Enzyme-Linked immunosorbent Assay



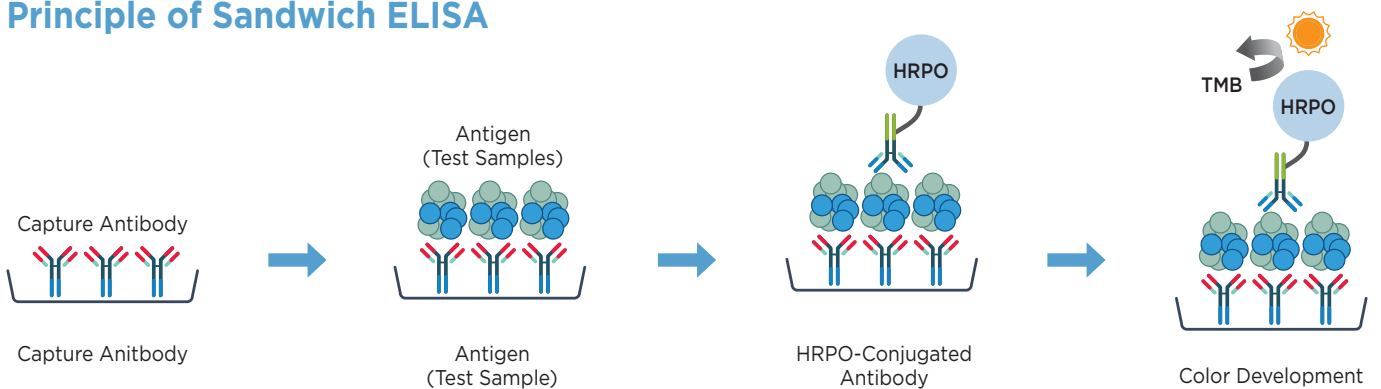
## Principle of Indirect ELISA (i-ELISA)



## Principle of Blocking ELISA (b-ELISA)



## Principle of Sandwich ELISA



# VDPro<sup>®</sup> Check

ELISA Software



VDPro<sup>®</sup> Check is provided the automated data analysis for VDPro<sup>®</sup> ELISA products.

## Introduction

- + This program enables analysis of results on the basis of absorbance.
- + This software can be applied to various ELISA products according to the livestock type, and each can be analyzed separately by the desired unit type, age, check date, etc.
- + All analysis data can be saved in Excel or PDF.

## Features

- + Analysis software for convenient data analysis of VDPro<sup>®</sup> ELISA.

## Support Language

- + English, Chinese

## Supported Equipment (ELISA reader)

- + Biotek ELx800/ELx808
- + Tecan F50
- + Tecan Sunrise
- + Thermo Multiskan FC
- + Biorad iMARK

## Applicable Product List

Ruminant	Swine		Poultry
Bovine Leukosis Ab b-ELISA	ADV AB Screen ELISA	CSFV Erns Ab b-ELISA	AIV AB ELISA
Bovine Tuberculosis AB ELISA	ADV gI AB ELISA	CSFV AG ELISA	IBDV AB ELISA
Brucella AB ELISA	APP2 AB ELISA	HP AB ELISA	IBV AB ELISA
Brucella Ab b-ELISA	APP5 AB ELISA	Japanese Encephalitis AB ELISA	IBV Ab ELISA ver 2.0
BVDV AB ELISA	ASFV Ab i-ELISA ver 2.0	MH AB ELISA	MG AB ELISA
FMDV NSP AB ELISA	BVDV Erns Ab i-ELISA	PCV2 AB ELISA	MS AB ELISA
FMDV Type A AB ELISA	CSFV AB ELISA	PRRSV AB ELISA	NDV AB ELISA
FMDV Type Asia1 AB ELISA	CSFV Ab c-ELISA		
FMDV Type O ELISA			
FMDV Type O Ab b-ELISA			
FMDV/SVA Ag ELISA			

# VDPRO<sup>®</sup> ELISA

## Product Catalogue

Let's contribute to human and animal health with diagnostic business





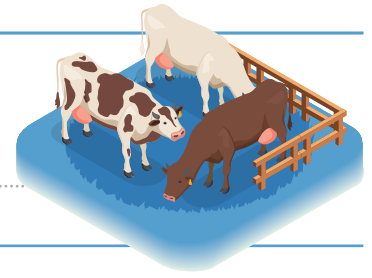


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\*DIVA : Differentiating infected from vaccinated animals

# 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

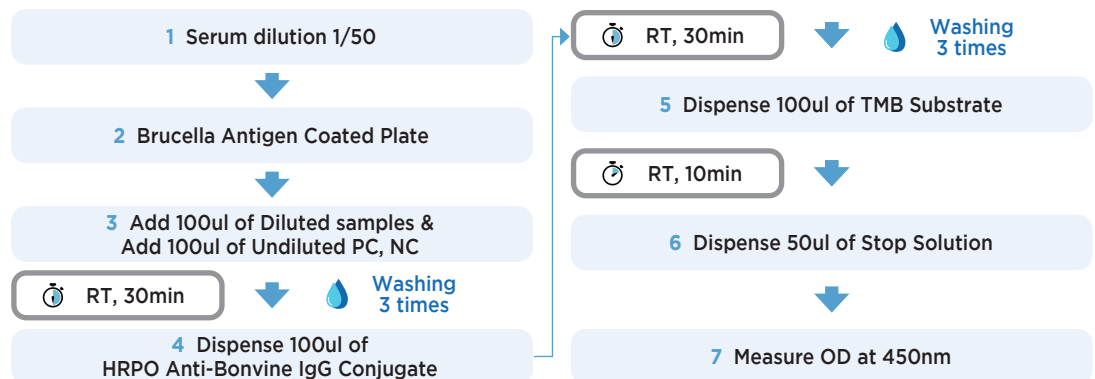


## Features

- + 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.
- + 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

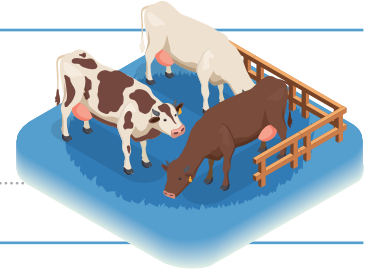
## Quick protocol



## Order Information

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

# VDPro® Bovine Leukosis Ab b-ELISA



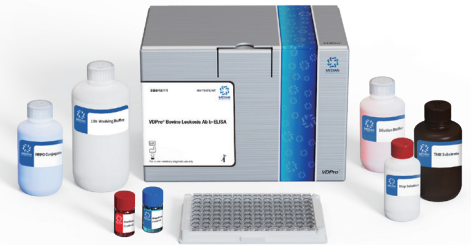
## Bovine Leukosis

**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

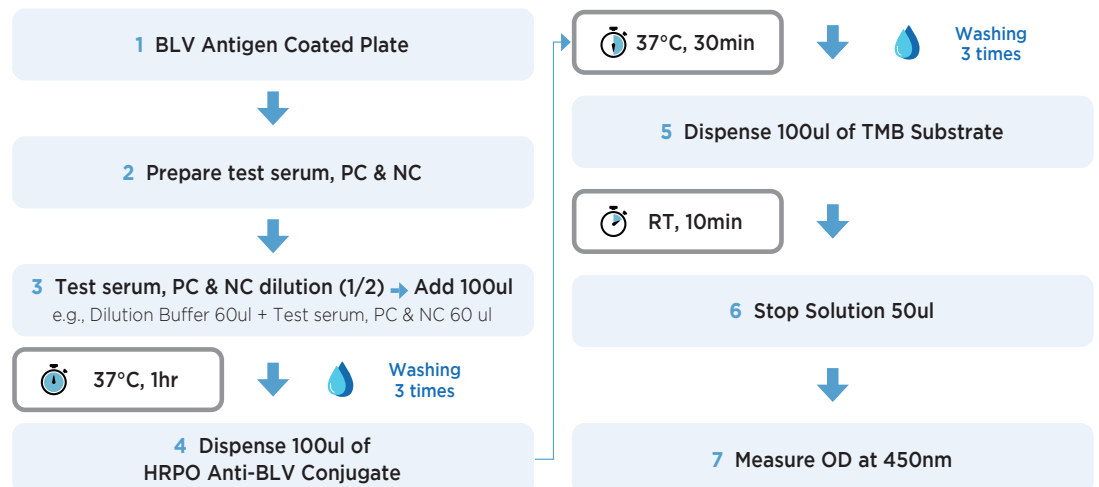
- + **Intended use** : Detection of Bovine leukosis antibody
- + **Species** : Cattle
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : Purified, inactivated BLV antigen



## Features

- + 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
- + Stable for 12 months in cold storage
- + 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

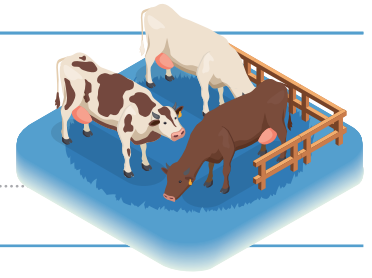
## Quick protocol



## 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 OIE 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 antibody
- + **Species** : Cattle
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : Bovine tuberculosis recombinant protein



## Features

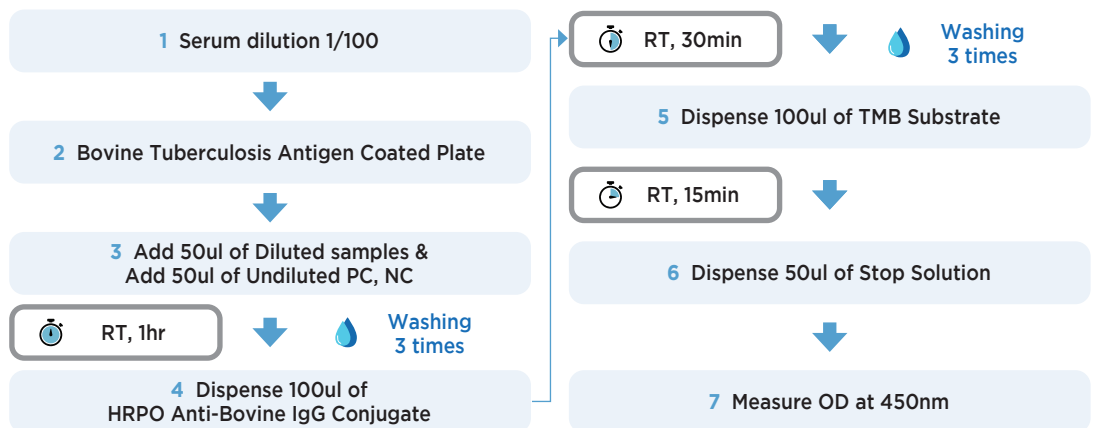
- + High correlation with the results of tuberculosis skin test (PPD).
- + Relatively high levels of sensitivity and specificity compared to other brands.
- + This product is a test that increases the accuracy of the late infection.
- + No cross-reactivity with other disease (FMD type O, BVD, Bovine 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

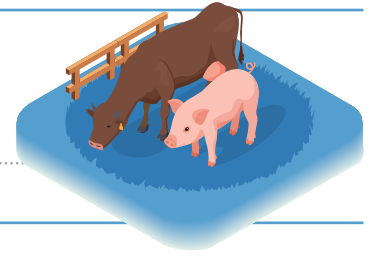
## Quick protocol



## 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 OIE. 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. Neutralizing antibody surveillance is crucial especially after vaccination.

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

## Introduction

- + **Intended use** : Detection of BVD antibody
- + **Species** : Cattle and swine
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : BVDV E2 recombinant protein



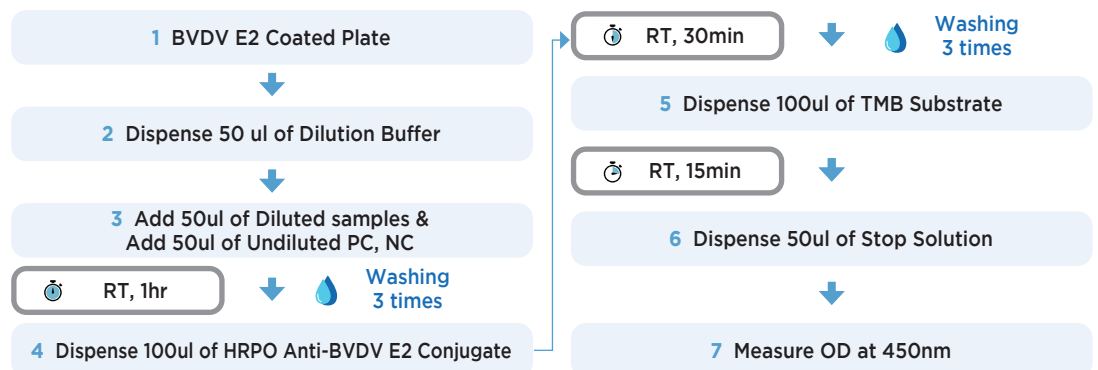
## Features

- + Good correlation with virus neutralization test (VNT).
- + Suitable for the antibody testing of the vaccination group.
- + High reproducibility in vaccination groups.
- + Cross-reactivity between BVDV and CSFV can be observed.
- + The sensitivity of VDPro® BVDV AB ELISA was confirmed to be 95.0% against the VNT positive bovine and porcine serum samples.
- + The specificity of VDPro® BVDV AB ELISA was confirmed to be 99.0% against the VNT negative bovine and porcine serum samples.

Panel	SN test	Sensitivity
Bovine Group 1	VNT ≥ 40	100.0% (85/85)
Bovine Group 2	VNT ≤ 20	97.1% (34/35)
Swine Group 3	VNT ≤ 63	96.8% (61/63)
Swine 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)
Swine Group 6	CSFV +	99.0% (192/194)
Swine Group 7	CSFV -	100.0% (34/34)
Total		99.0% (289/292)

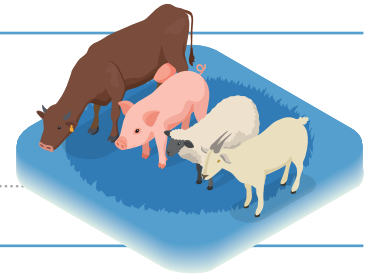
## Quick protocol



## Order Information

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

# VDPro® FMDV ELISA



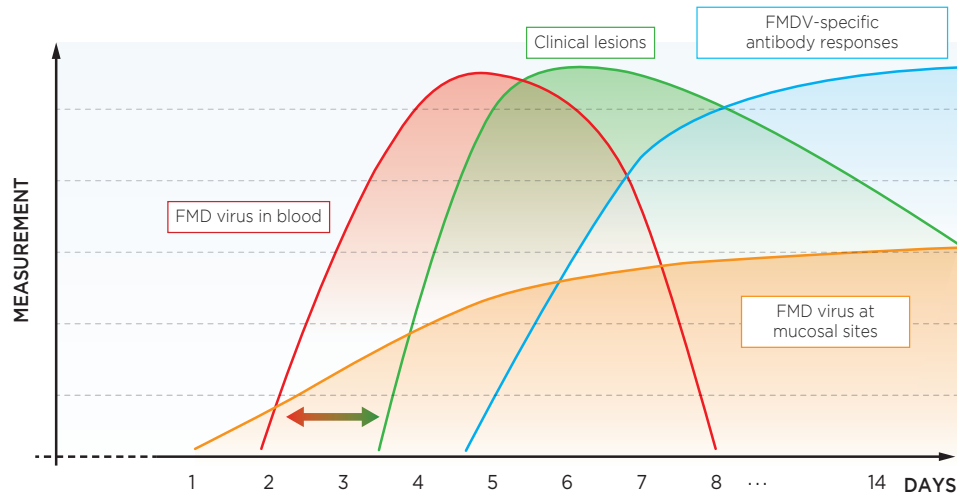
## FMDV Diagnosis

### Foot-and-Mouth Disease

**Foot-and-Mouth Disease (FMD)** is the first class legally notifiable communicable disease in Korea and a list disease determined by the Office of International Epizootics (OIE). It is an international epidemic disease that infects cloven-hoofed animals such as cattle, sheep, goat and swine. It is a very contagious disease that requires an intensive surveillance program. In addition, there are seven serotypes O, A, C, Asia1, SAT1, SAT2 and SAT3 so a great variety of diagnostics are necessary.

## Introduction

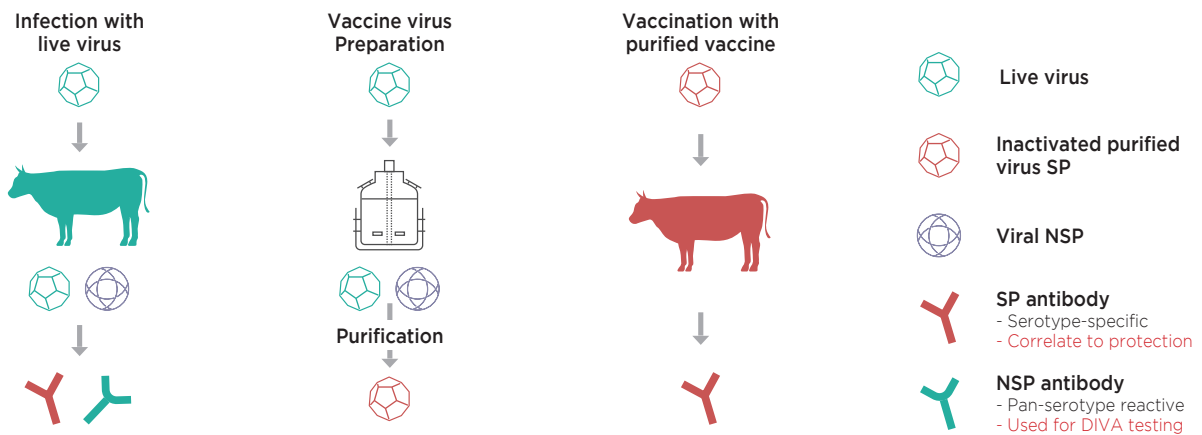
### Diagnostic windows for FMD



## Features

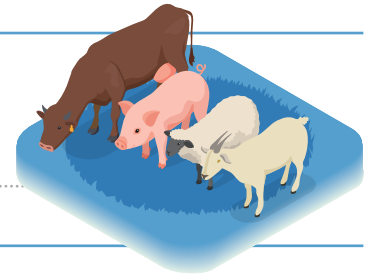
- + VDPro® FMDV ELISA products apply for DIVA (Differentiating Infected from Vaccinated Animals).
- + Good correlation with virus neutralization test (VNT).
- + Highly enhanced reactivity of coating antigen expressed by dual expression system
- + Excellent performance (sensitivity and specificity) regardless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

## FMDV DIVA system



	SP antibody	NSP antibody
Field infection	Positive	Positive
Vaccination	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

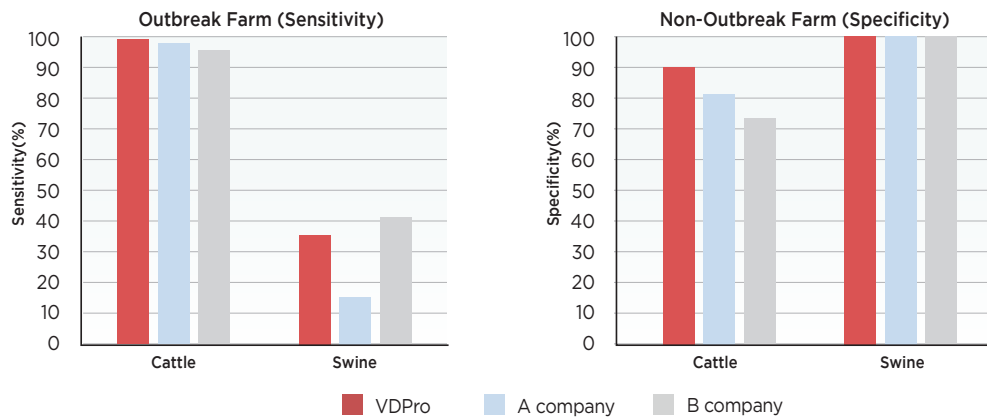
- + **Intended use** : Detection of FMDV NSP antibody
- + **Species** : Cattle, sheep, goat and swine
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV 3AB recombinant protein



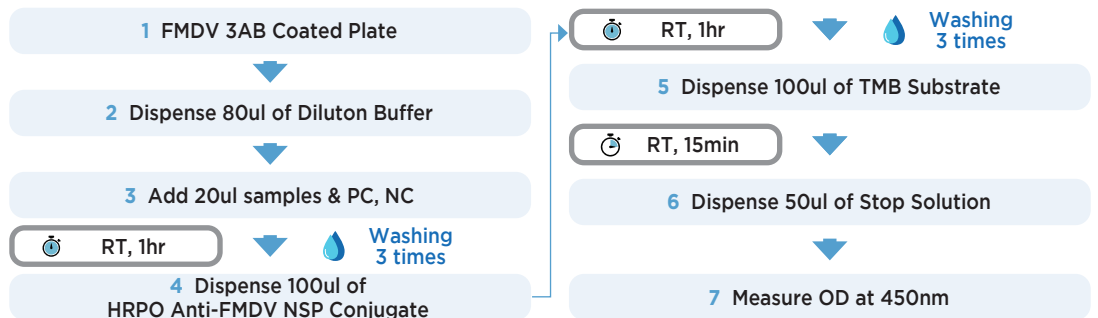
### Features

- + 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 swine)

### Performance Test



### Quick protocol

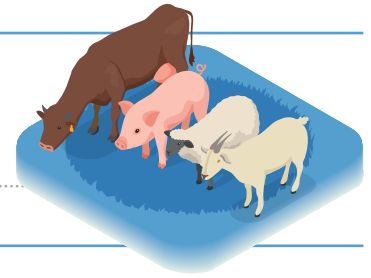


### Order Information

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



# VDPro® FMDV Type O ELISA

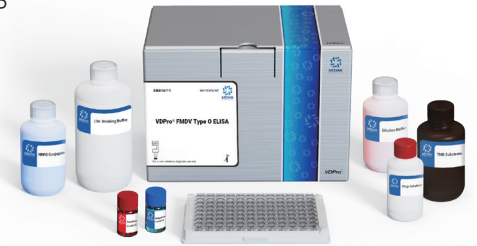


## FMDV SP AB ELISA

**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 swine
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV type O P13C recombinant protein (rP13C-O)



### Features

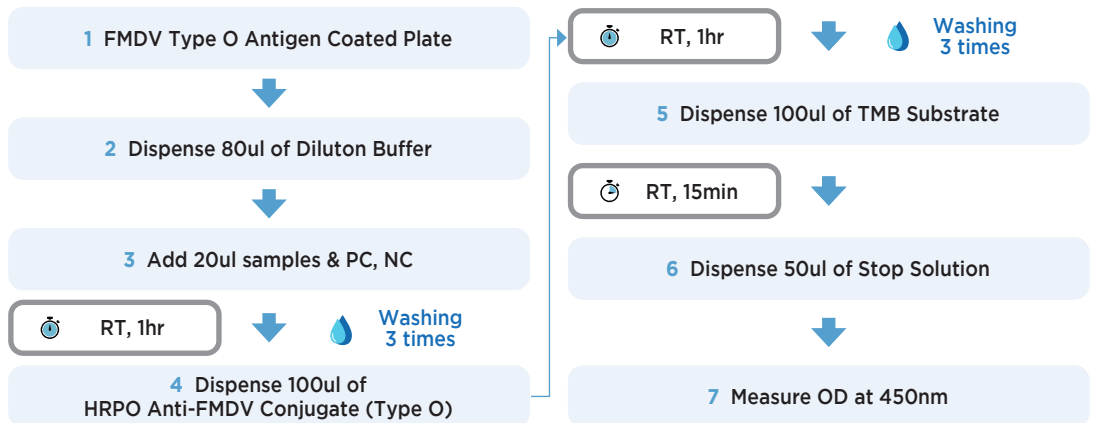
- + Good correlation with viral neutralization test (VNT)
- + Highly enhanced reactivity of coating antigen expressed by dual expression system
- + Excellent performance (sensitivity and specificity) regardless of species.
- + Antibody titer monitoring after vaccination.

Group	Species	Sensitivity
VNT Positive (Above VNT45)	Cattle	99.1% (106/107)
	Swine	95.0% (19/20)
	Goat	95.5% (21/22)
	Sheep	100.0% (3/3)
	Others	100.0% (2/2)
<b>Total</b>		<b>98.1% (151/154)</b>

Group	Species	Specificity
VNT Negative (Below VNT45)	Cattle	99.2% (127/128)
	Swine	100.0% (149/149)
	Goat	100.0% (65/65)
	Sheep	87.1% (27/31)
	Deer	100.0% (11/11)
<b>Total</b>		<b>98.7% (379/384)</b>

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

### Quick protocol

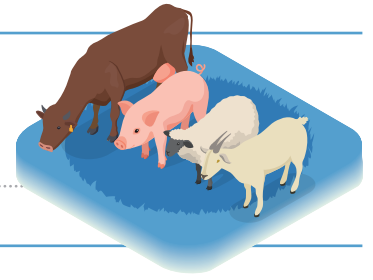


### Order Information

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



# VDPro® FMDV Type A AB ELISA

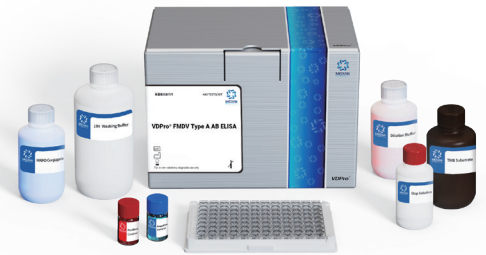


## FMDV SP AB ELISA

**VDPro® FMDV Type A AB ELISA** was developed to detect neutralizing 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

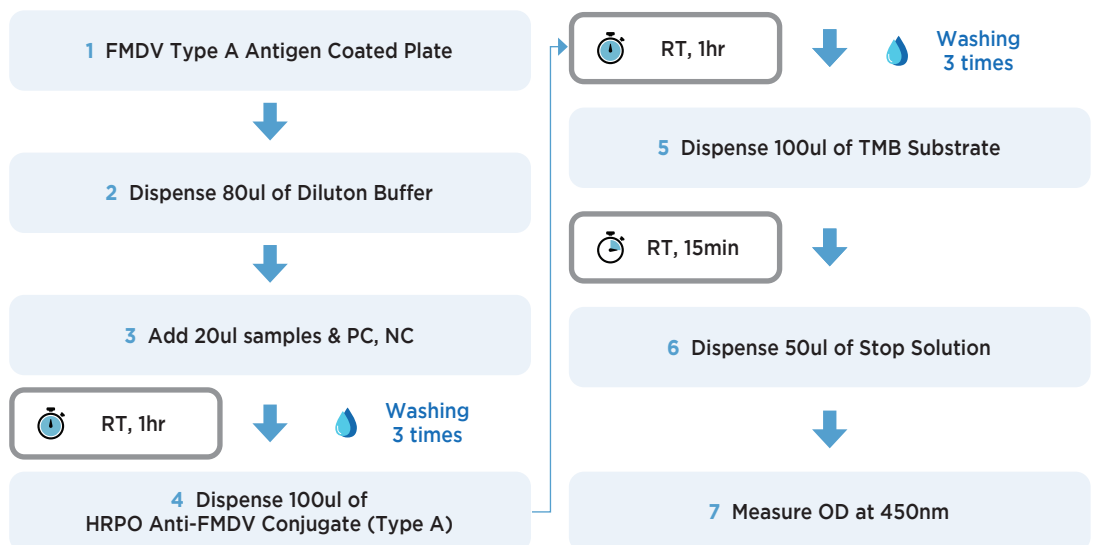
- + **Intended use** : Detection of antibody against FMDV type A
- + **Species** : Cattle, sheep, goat and swine
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV type A P13C recombinant protein (rP13C-A)



## 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).

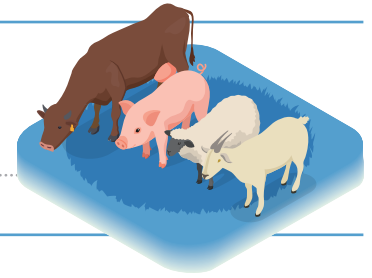
## Quick protocol



## Order Information

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

# VPro® FMDV Type Asia1 AB ELISA

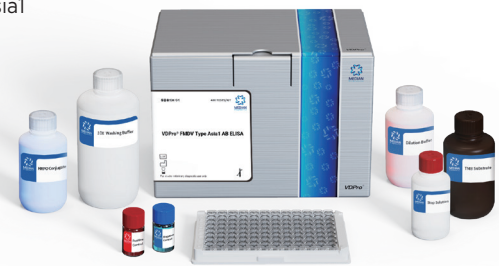


## FMDV SP AB ELISA

**VPro® FMDV Type Asia1 AB ELISA** was developed to detect neutralizing 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 neutralizing 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

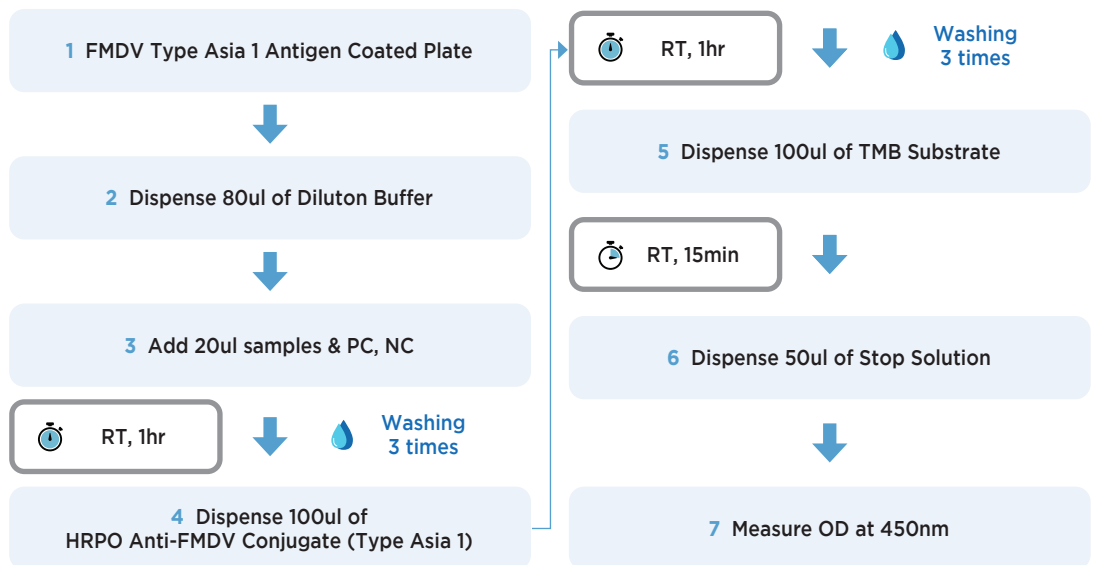
- + **Intended use** : Detection of antibody against FMDV type Asia1
- + **Species** : Cattle, sheep, goat and swine
- + **Specimens** : Serum
- + **Method** : Blocking ELISA
- + **Coated antigen** : FMDV type Asia1 P13C recombinant protein (rP13C-Asia1)



### Features

- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Stable for more than 12 months in cold storage
- + Highly enhanced reactivity of coating antigen expressed by dual expression system.

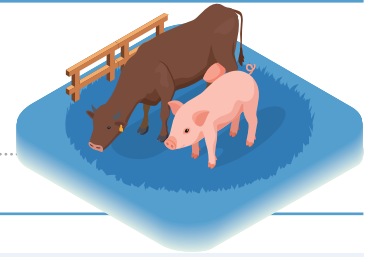
### Quick protocol



### Order Information

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

# VDPro® FMDV / SVA Ag ELISA



## Foot-and-Mouth Disease

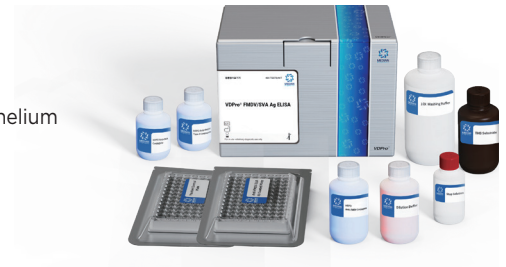
## Senecavirus A (Seneca Valley Virus)

**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.

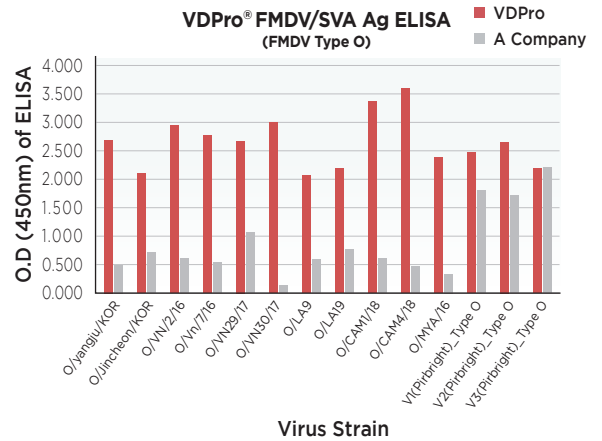
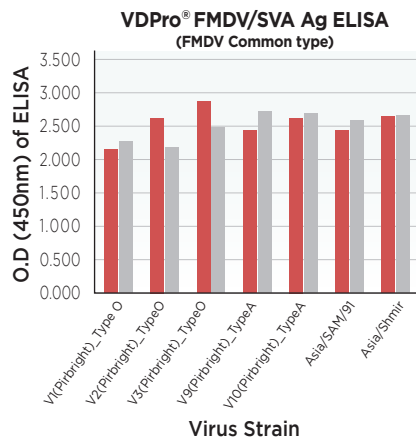
## Introduction

- + **Intended use** : Detection of FMDV/SVA and FMDV serotyping (type O, A, Asia1)
- + **Species** : Cattle and swine
- + **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

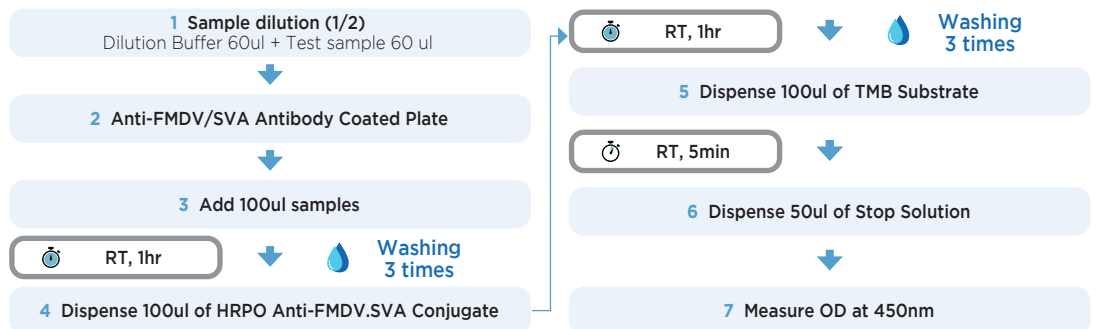


## Features

- + 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 OIE FMDV Reference Lab in South Korea



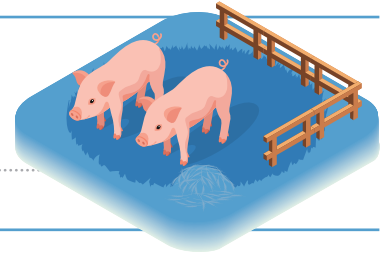
## Quick protocol



## 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



## Swine 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 porcine serum. The ELISA plate is coated with ASFV recombinant p30 & p22 protein.

## Introduction

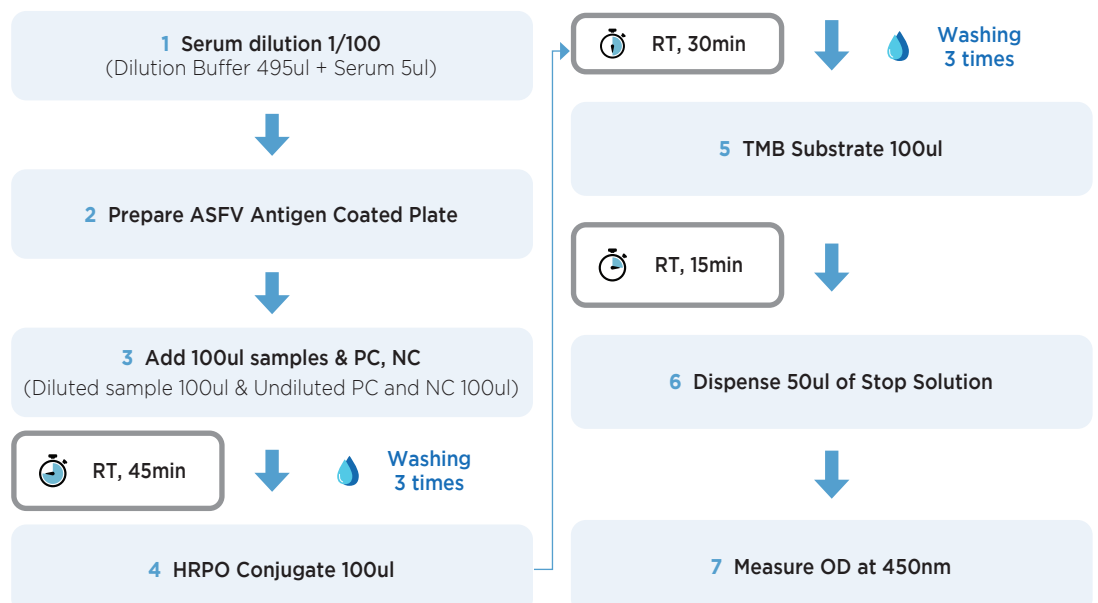
- + **Intended use** : Detection of ASF antibody
- + **Species** : Swine
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : p30 & p22 recombinant protein



## Features

- + Serological test for early detection ASF in swine herd
- + Excellent agreement with the IPT reference test
- + Superior performance comparing to competitor's product
- + Good ability of detecting antibodies against genotype 2 as well as genotype 1

## Quick protocol

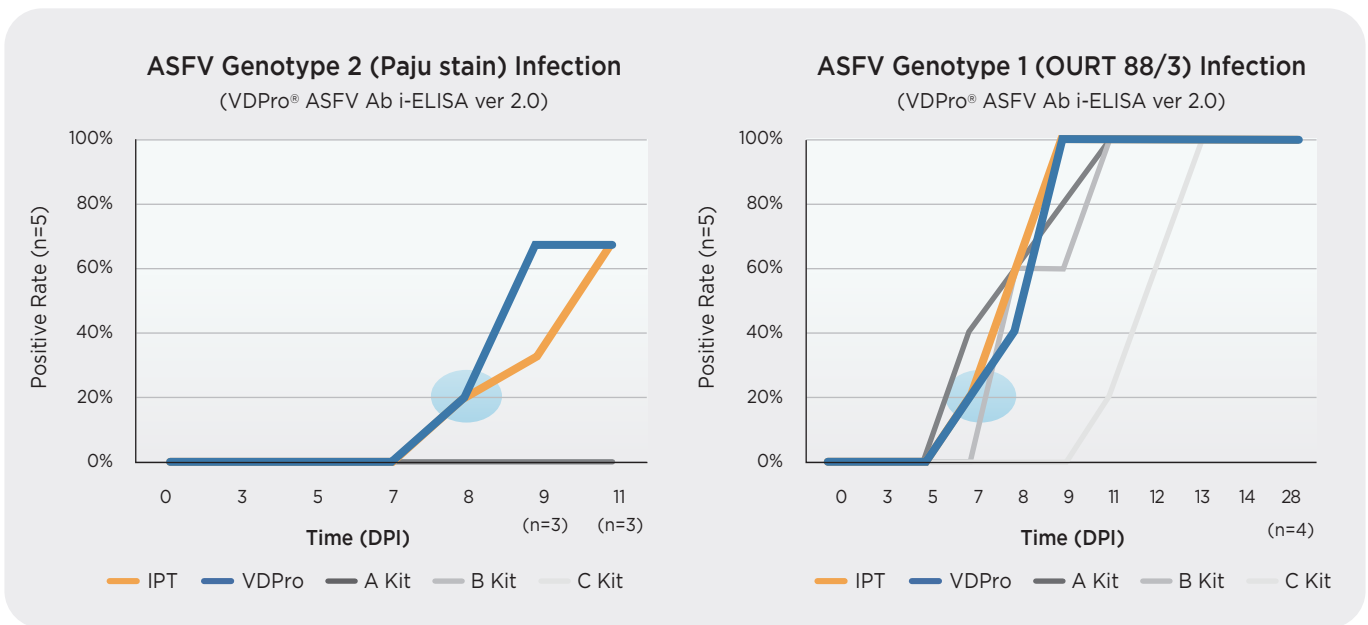


## Performance

### 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)	Swine	49	Positive	32	65.3%	33	67.3%	98.0%
			Negative	17		16		
Paju (Genotype 2)	Swine	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%

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

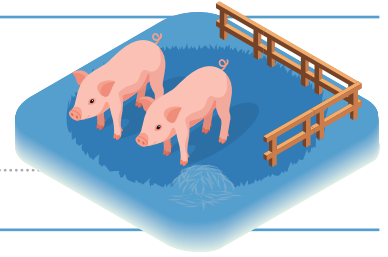
\* Swine sera collected from ASF non-outbreak domestic and oversea area

### 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

# VPro® CSFV AB c-ELISA



## Swine Systemic Disease

VPro® CSFV AB c-ELISA is designed to detect presence of anti-E2 antibody in porcine serum.

### Introduction

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

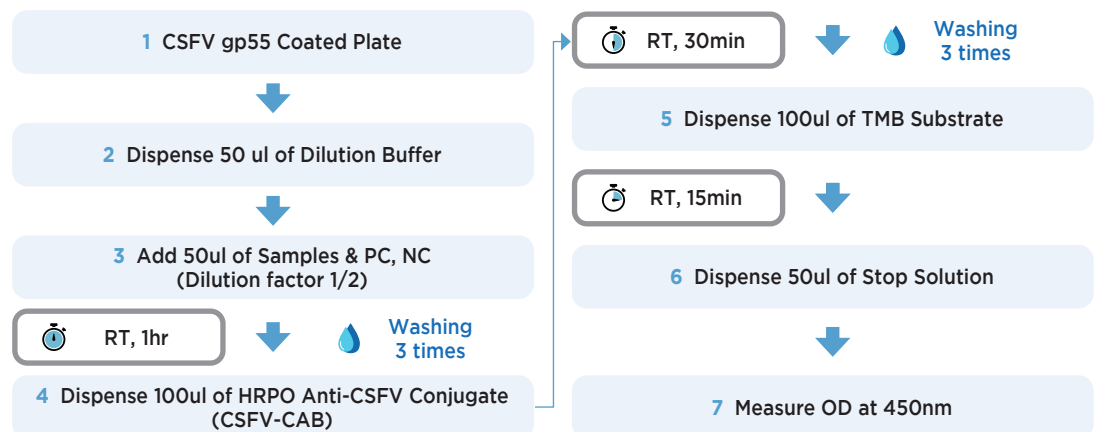


### Features

- + Cost savings by using strip plate
- + High reproducibility and accuracy
- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + Safety by using recombinant antigen
- + Stable for more than 12 months in cold storage
- + 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 OIE 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 porcine 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)

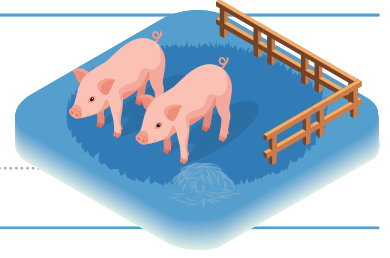
### Quick protocol



### Order Information

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

# VDPro® CSFV AG ELISA



## Swine 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 OIE. It is highly infectious and also has a high fatality rate in swine. 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 Viral Diarrhea Virus (BVDV) and Border Disease Virus (BDV).

## Introduction

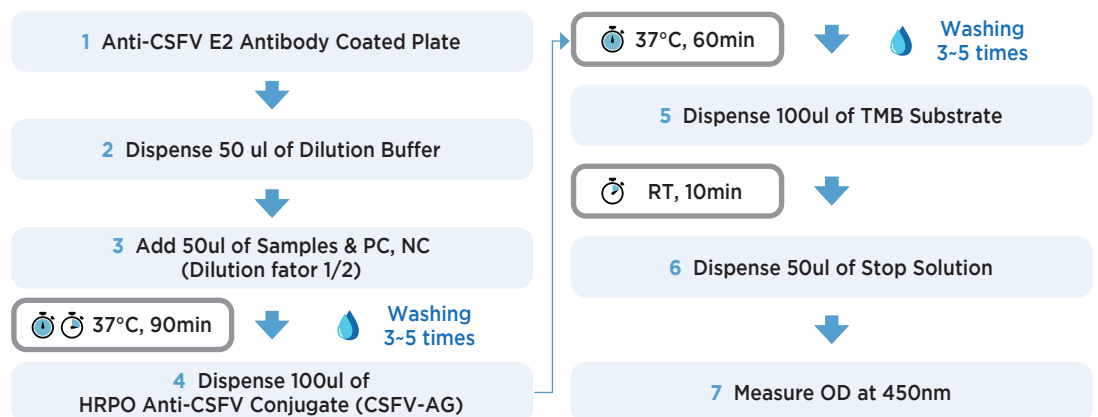
- + **Intended use** : Detection of CSFV
- + **Species** : Swine
- + **Specimens** : Tissues, Leukocyte, Cell culture, Whole Blood
- + **Method** : Double Antibody Sandwich ELISA
- + **Coated antibody** : Anti-CSFV E2 antibody



## Features

- + Excellent correlation with RT-PCR and virus isolation
- + Limit of detection (LoD) :  $10^3$  TCID<sub>50</sub>/mL (regardless of CSFV genotype)
- + 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.
- + Suitable product for countries using the LOM vaccine.
- + Color coded buffer system
- + Ready-to-use reagent, easy test
- + High reproducibility and accuracy
- + Stable for more than 12 months in cold storage

## Quick protocol

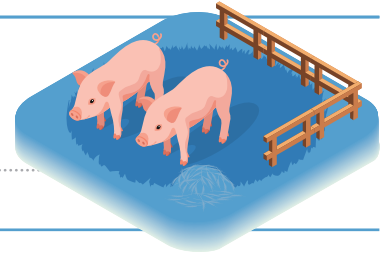


## Order Information

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



# VDPro® PCV2 AB ELISA



## Swine Systemic Disease

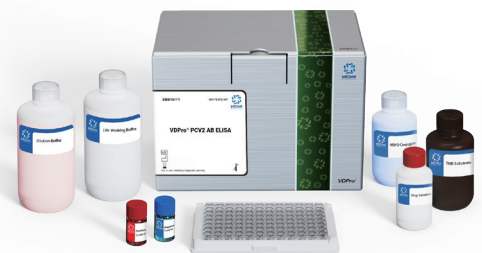
### Porcine Circovirus type 2 (PCV2)

**Porcine Circovirus type 2 (PCV2)** has been identified as the causal agent of post-weaning multisystemic wasting syndrome (PMWS). PCV2 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.

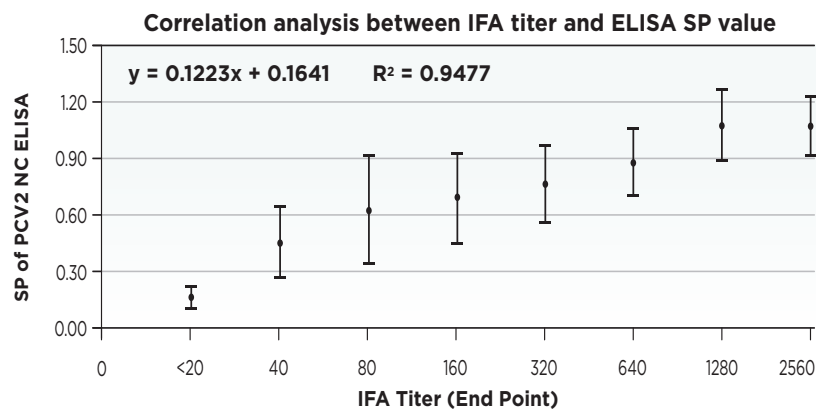
## Introduction

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

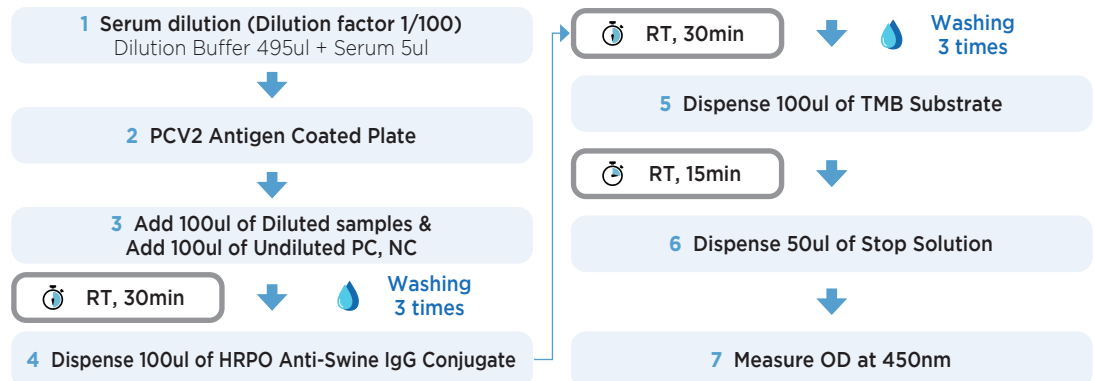


## Features

- + 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

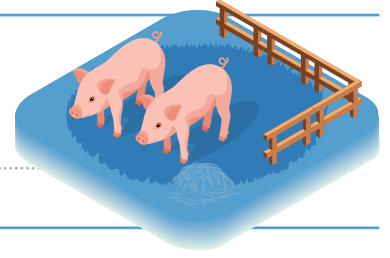


## Order Information

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



# VDPro® ADV AB ELISA

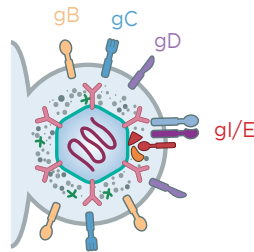


## Swine Reproductive Failure Disease

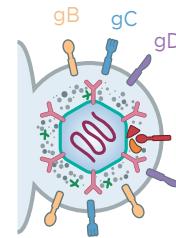
### Aujeszky's Disease

Swine 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 swine and the recovered swine 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

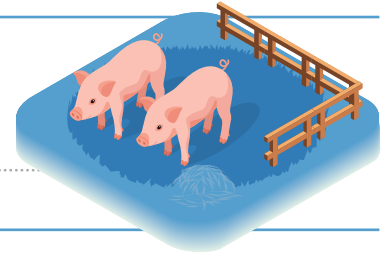
Products Name	Infected	Vaccinated	Unvaccinated
VDPro® ADV AB Screen ELISA (gB)	O	O	X
VDPro® ADV gI AB ELISA	O	X	X

- 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 gI AB ELISA



## Swine Reproductive Failure Disease

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

### Introduction

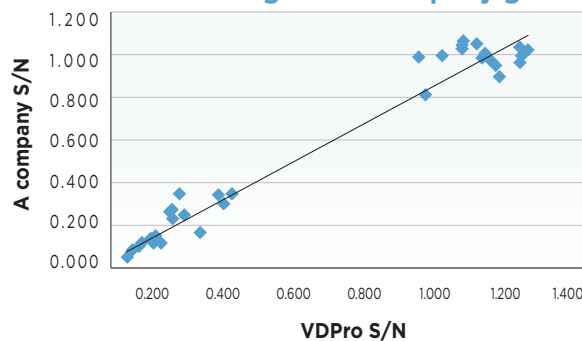
- + **Intended use** : Detection of Aujeszky's disease virus gI (gE) antibody
- + **Species** : Swine
- + **Specimens** : Serum or plasma
- + **Method** : Blocking ELISA
- + **Coated antigen** : Purified, inactivated ADV antigen



### Features

- + High correlation with Virus Neutralization Test (VNT)
- + The sensitivity using international standard sera meets to OIE standard.
- + 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

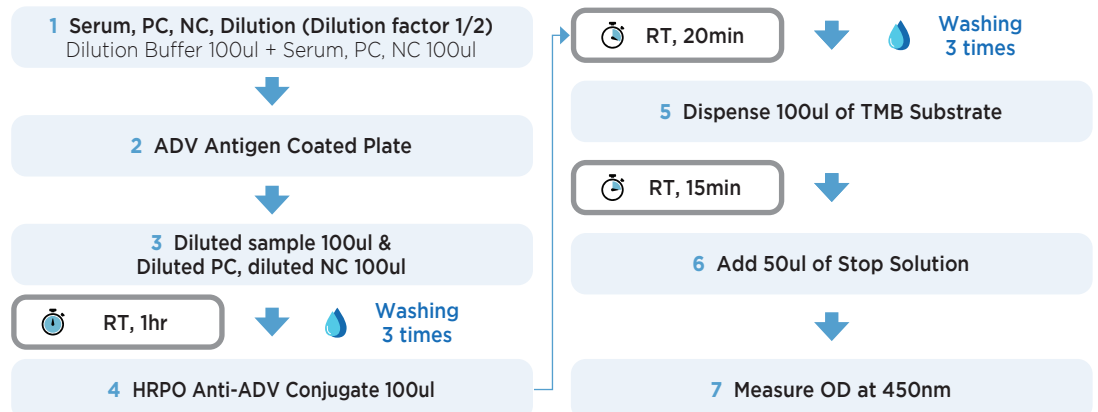
VPro gE vs A company gE



$$y = 0.8793x - 0.0376$$

$$r^2 = 0.9773$$

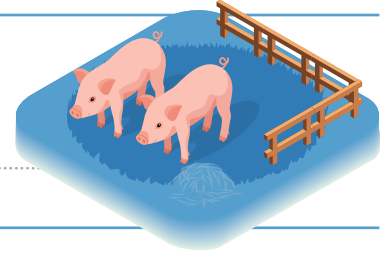
### Quick protocol



### Order Information

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

# VPro® ADV AB Screen ELISA



## Swine Reproductive Failure Disease

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

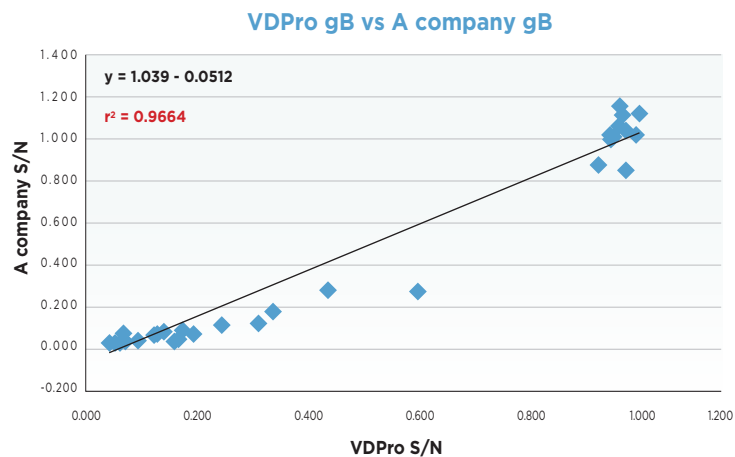
### Introduction

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

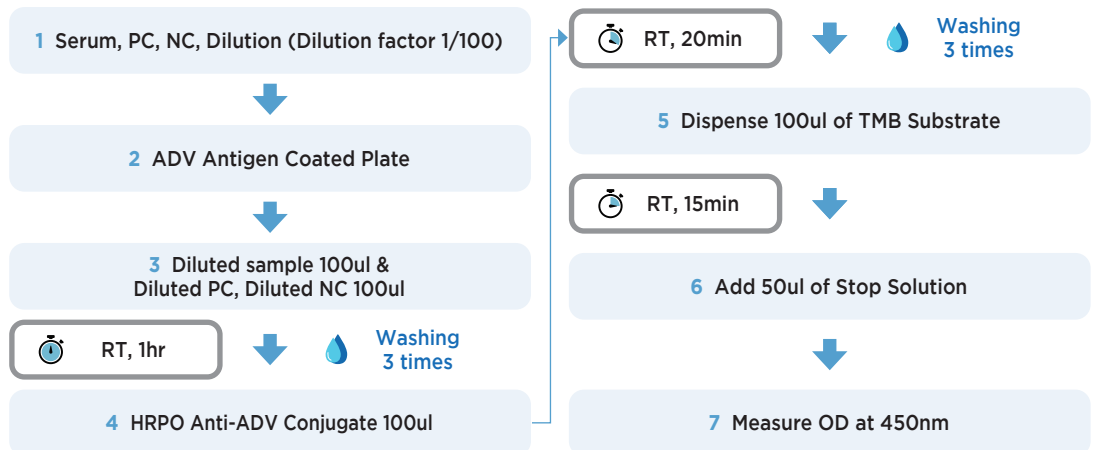


### Features

- + It is used for qualitative measurements of neutralizing antibodies against ADV.
- + High concordance rate with virus neutralizing antibody titer



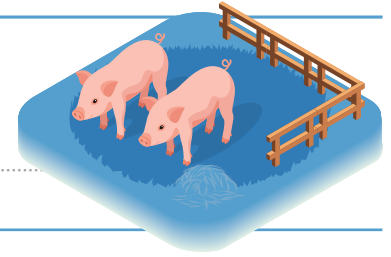
### Quick protocol



### Order Information

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

# VPro® Japanese Encephalitis AB ELISA



## Swine 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 swine. The virus in endemic areas is persisting in nature through a cycle of transmission involving mosquitoes, domestic and wild birds, domestic pigs, and humans. Swine 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).

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

### Introduction

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

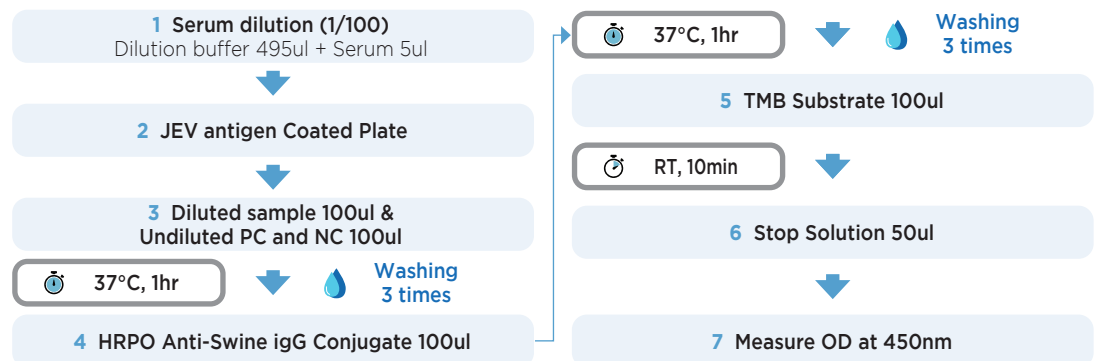


### Features

- + 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
- + Stable for more than 12 months in cold storage

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 porcine 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 <sup>2</sup>
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

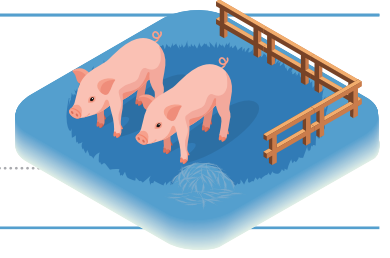
### Quick protocol



### Order Information

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

# VDPro® APP2 AB ELISA



## Swine 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 swine.

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

## Introduction

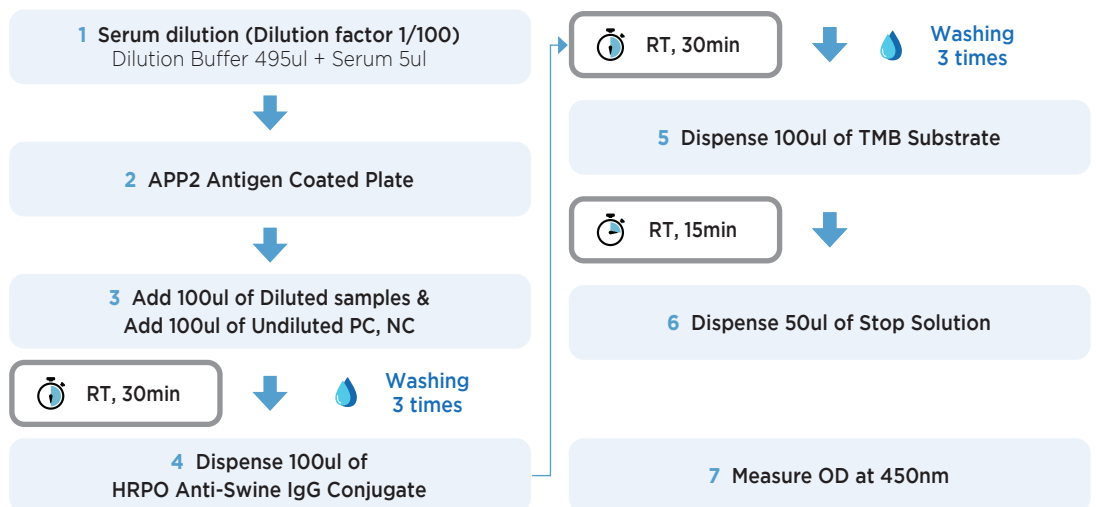
- + **Intended use** : Detection of anti-APP2 antibody
- + **Species** : Swine
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : APP2 OMP (membrane protein) antigen



## 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
- + Stable for more than 12 months in cold storage
- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after APP2 vaccination in swine herds.

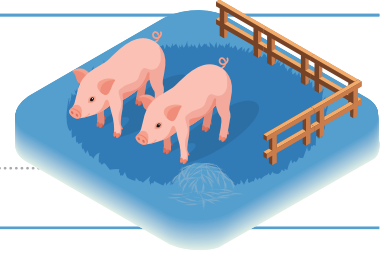
## Quick protocol



## Order Information

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

# VDPro® APP5 AB ELISA



## Swine 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 swine.

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

## Introduction

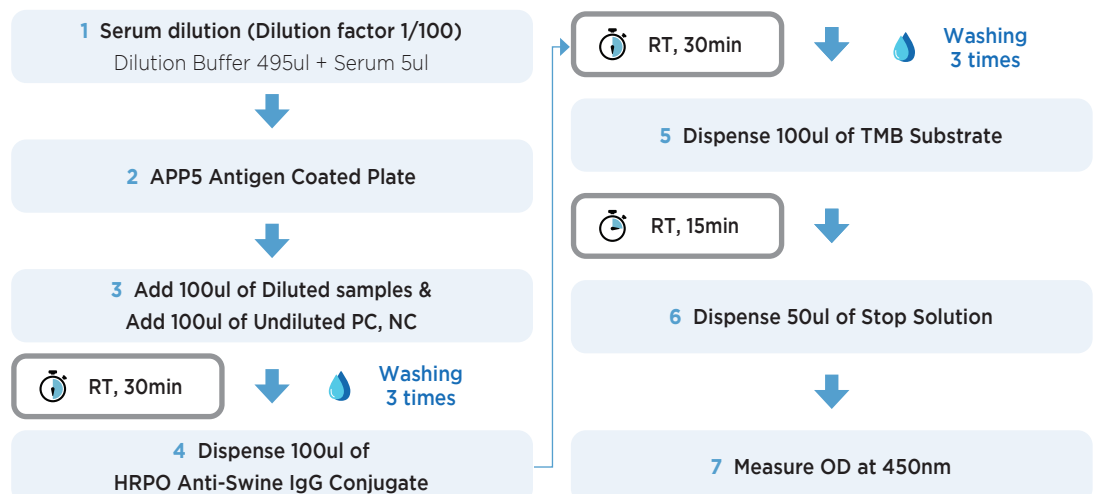
- + **Intended use** : Detection of anti-APP5 antibody
- + **Species** : Swine
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : APP5 OMP (membrane protein) antigen



## 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
- + Stable for more than 12 months in cold storage
- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after APP5 vaccination in swine herds.

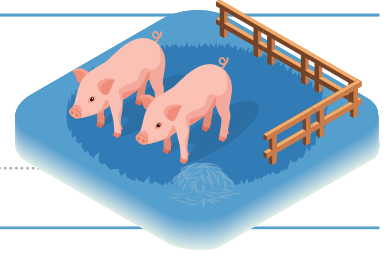
## Quick protocol



## Order Information

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

# VDPro® HP AB ELISA



## Swine Reproductive Failure Disease

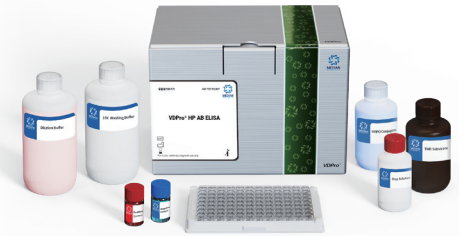
### *Haemophilus Parasuis*

**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 swine.

**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 porcine herds.

## Introduction

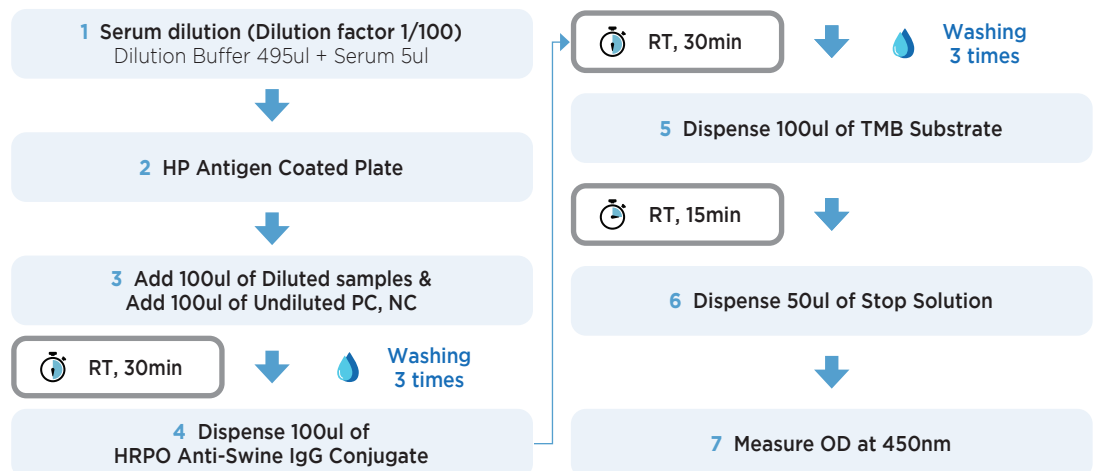
- + **Intended use** : Detection of anti-HP antibody
- + **Species** : Swine
- + **Specimens** : Serum
- + **Method** : Indirect ELISA
- + **Coated antigen** : HP recombinant protein



## 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
- + Stable for more than 12 months in cold storage
- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after HP vaccination in swine herds.

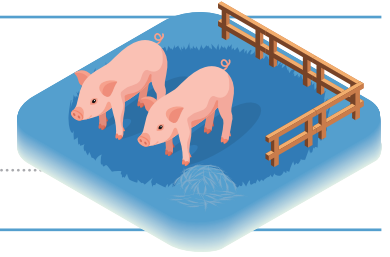
## Quick protocol



## Order Information

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

# VDPro<sup>®</sup> MH AB ELISA



## Swine Respiratory Disease

### *Mycoplasma Hyopneumoniae*

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

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

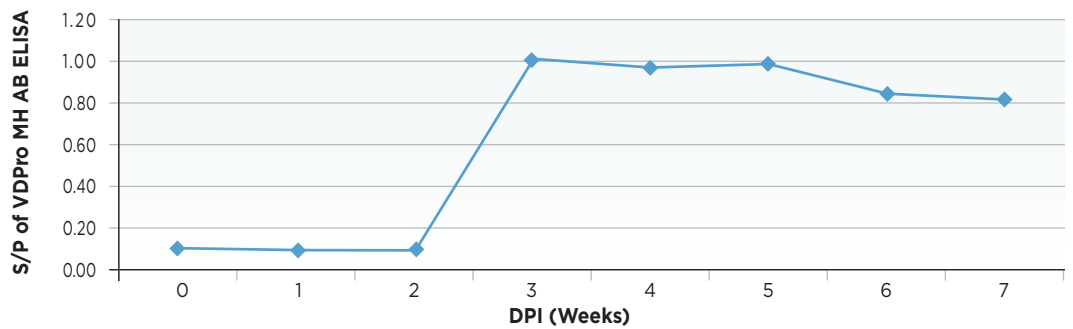
## Introduction

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

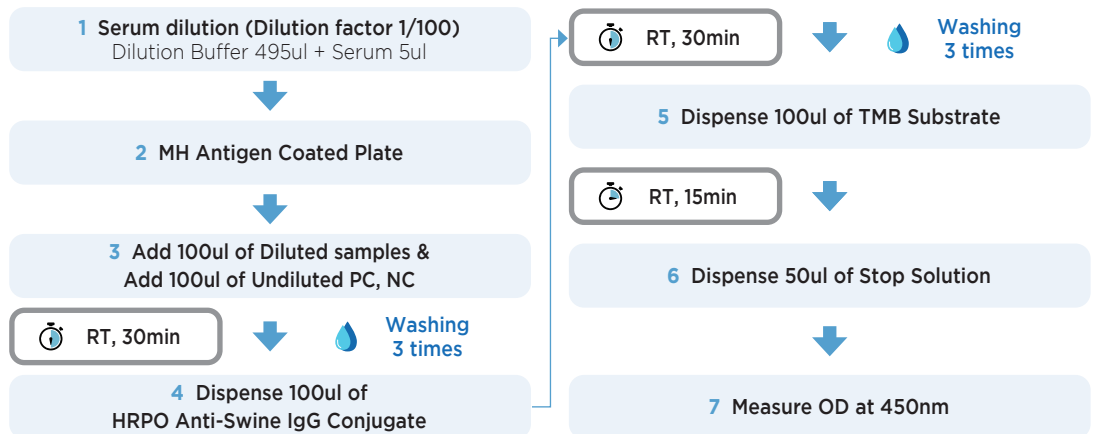


## Features

- + Effective tool to screen for infections and immunity levels through monitoring average antibody levels after MH vaccination in swine 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 swine negative sera
- + Sero-conversion of MH vaccination



## Quick protocol

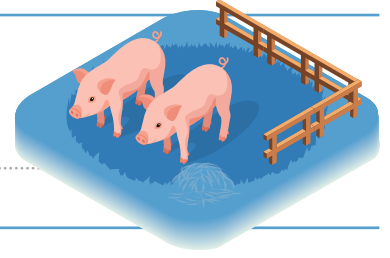


## Order Information

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



# VDPro® PRRSV AB ELISA



## Swine Reproductive Failure Disease & Respiratory Disease

### Porcine Reproductive Respiratory Syndrome

**Porcine Reproductive and Respiratory Syndrome (PRRS)** is a disease characterized by reproductive disorder in pregnant swine, 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** : Swine
- + **Specimens** : Serum and plasma
- + **Method** : Indirect ELISA
- + **Coated antigen** : PRRSV recombinant protein



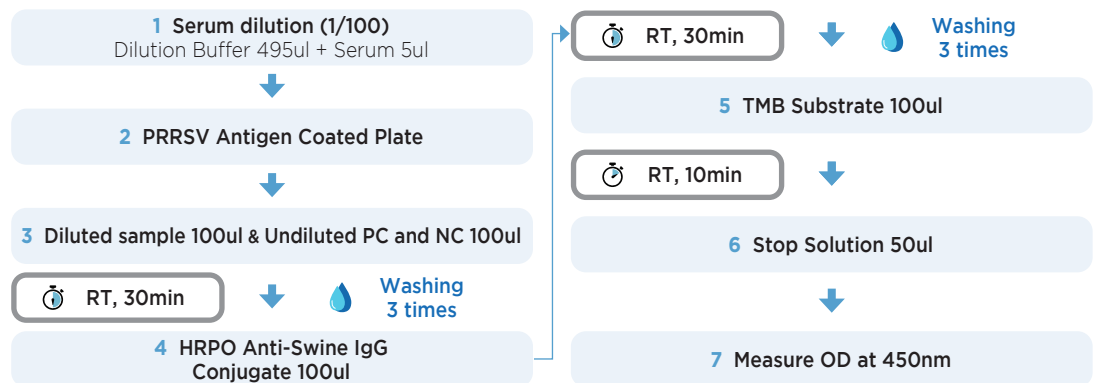
## Features

- + 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	<b>117</b>	3	<b>114</b>	97.4	0.162	<b>0.08</b>	0.69	-0.18

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

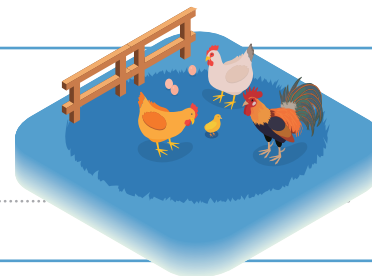
## Quick protocol



## Order Information

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

# VDPro® Poultry ELISA System



## Poultry diseases

There are several viral and bacterial diseases affecting birds, most of which are belong to the legal communicable diseases in Korea as well as diseases on the OIE list. These diseases cause serious damage to the productivity of the poultry industry. To detect poultry diseases, poultry serum tests and pathogen tests are necessary in addition to periodic surveillance and data accumulation management. For the health management and maintenance of high productivity of poultry in farms, vaccinations for six or more diseases as well as serum profile management via periodic serologic tests are required.

**VDPro® Poultry ELISA System** have excellent performance in the comprehensive poultry serum profile management. It also offers excellent reliability and data compatibility.

## Product

### VDPro® Poultry ELISA System

- + Single dilution (1/500), quantitative ELISA
- + 1-step dilution linked multi-antibody test for 6 pathogens
- + High correlation with standard tests
- + Support profile analysis of immune status against 6 pathogens
- + Rapid test within 60 minute incubation
- + Ideal reagent to robotic ELISA system

## Features

- + Color coded buffer system
- + Ready-to-use reagents
- + Simple procedure
- + Cost effective strip
- + 1-step dilution & multi-Ab ELISA
- + High reproducibility in 60 minute incubation time
- + Stable for more than 12 months

## Order Information

Cat No.	Product Name	Quantity
EP-AIV-01	VDPro® AIV AB ELISA	192 Tests, 480 Tests
EP-IBD-01	VDPro® IBDV AB ELISA	192 Tests, 480 Tests
EP-IBV-01	VDPro® IBV AB ELISA	192 Tests, 480 Tests
EP-MSY-01	VDPro® MS AB ELISA	192 Tests, 480 Tests
EP-NDV-01	VDPro® NDV AB 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.

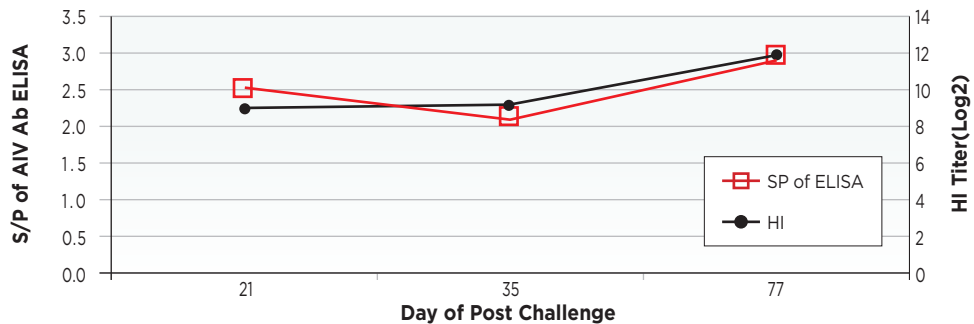
## Introduction

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

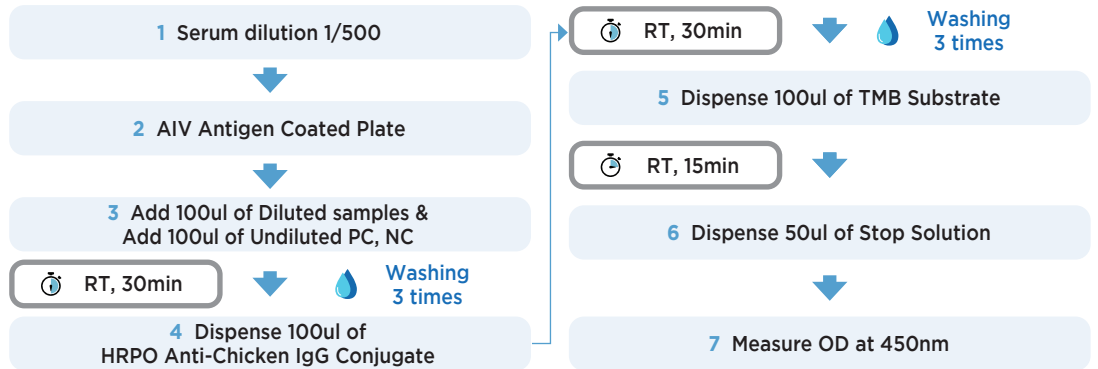


## Features

- + 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<sup>1.93</sup> \*OIE positive criteria HI titer 2<sup>4</sup>



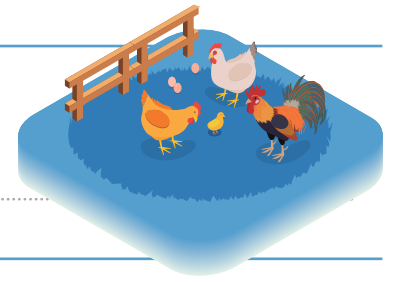
## Quick protocol



## 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

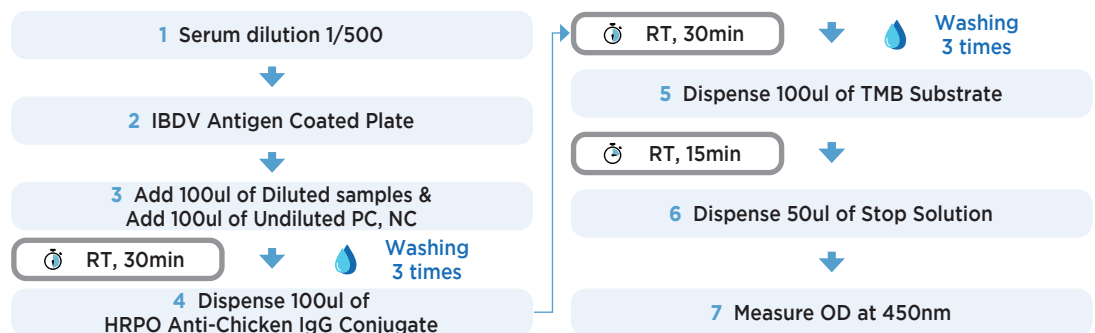


## Features

- + 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 OIE 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 (OIE 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

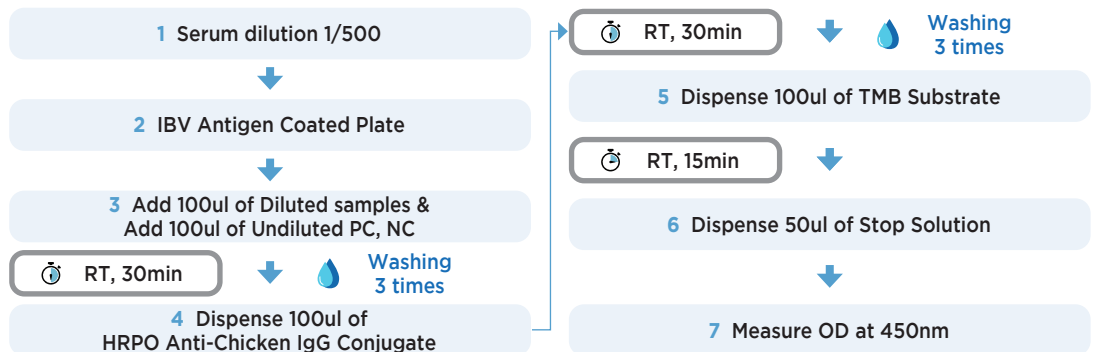


## Features

- + 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 : $r^2 = 0.890$

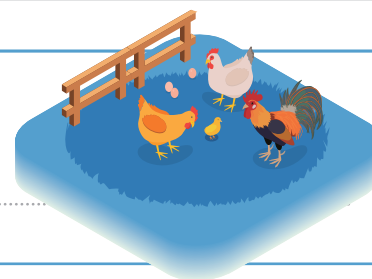
## Quick protocol



## Order Information

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

# VDPro® 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.

**VDPro® 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

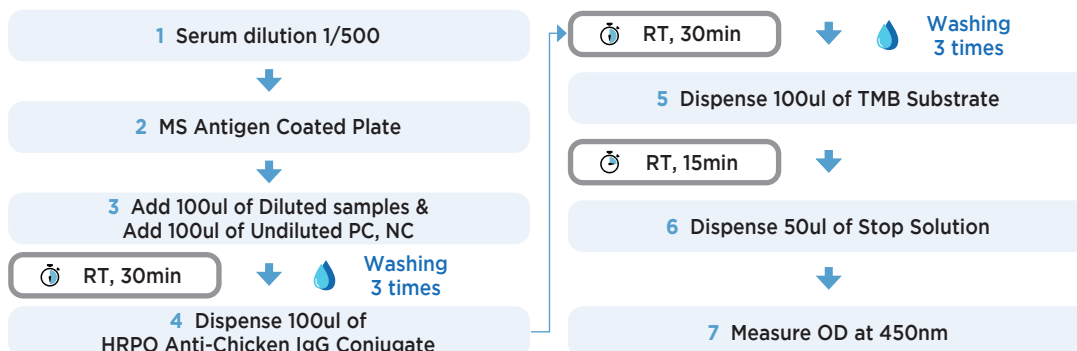


## Features

- + 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 (OIE 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	VDPro® 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.

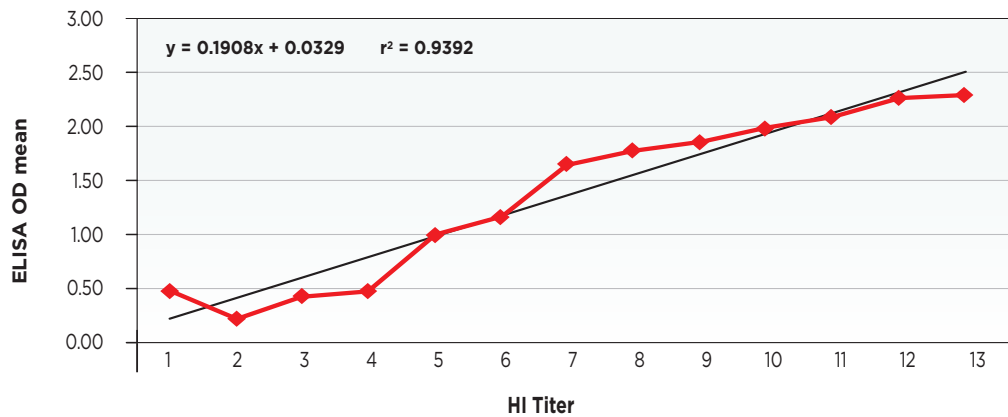
## Introduction

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

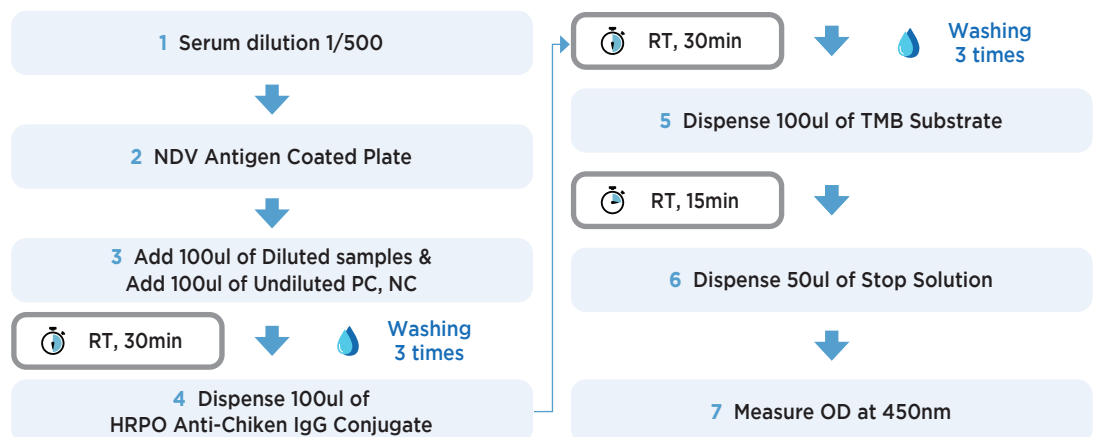


## Features

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

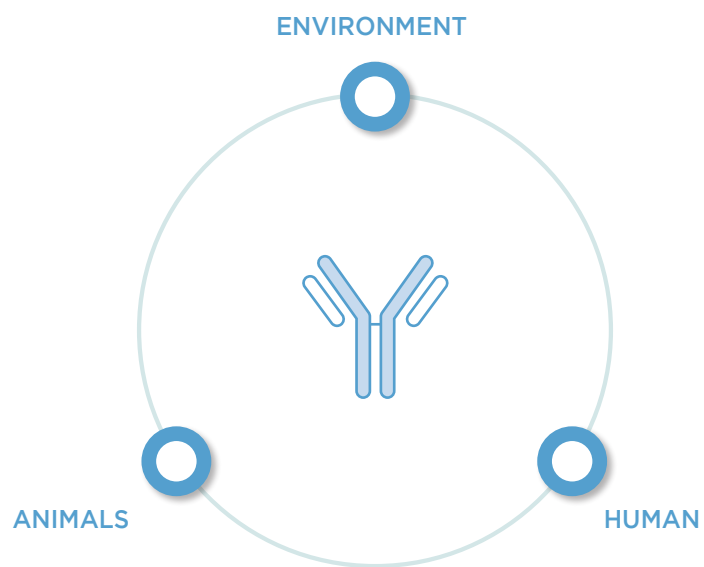


## Quick protocol



## Order Information

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



"For One Health"