



SVANODIP® FMDV-Ag

Immediate and early detection of Foot-and-Mouth-Disease-Virus (FMDV) in livestock

SUMMARY | SVANODIP® FMDV-Ag is a lateral flow device detecting all seven serotypes of the FMDV. The test captures antigen in fluids from unruptured vesicles/aphthae and vesicular epithelium from ruptured lesions. The easiness of the test procedure and fast availability of an accurate result (within 10 min) enables fast and informed decision making.



YOUR CHALLENGE is a highly contagious virus

FMDV causes an acute vesicular disease in cloven-hoofed animals, resulting in impaired performance and loss of yield. Due to its high contagious nature the FMDV can cause devastating epidemics in naïve populations leading to grave economic consequences for the livestock industry. There are seven immunologically distinct serotypes, i.e. O, A, C, SAT 1, SAT 2, SAT 3 and Asia 1 that vary between geographical regions. All have the potential to appear as epidemics in naïve populations.

YOUR GOAL is fast and reliable identification of FMDV – all strains

Recognition of typical disease symptoms by farmers and veterinarians initiates a cascade of actions. Veterinary authorities coordinate the evaluation of clinical symptoms and submission of samples to reference laboratories for confirmatory testing. In acute disease phase ideal specimens are fluids from unruptured vesicles or vesicular epithelium from ruptured lesions. The time duration for obtaining accurate and confirmed results is essential for controlling FMDV outbreaks and avoiding transmission.

ASSAY OVERVIEW

SVANODIP® FMDV-Ag Extraction kit

Species	Cloven-hoofed animals		
Samples	Fluid from vesicles/aphthea. Mucosal tissue/ vesicular epithelium from ruptured lesions ^a		
Type	Lateral flow device based on 1F10 monoclonal antibody		
Article number	Samples	Devices	Format
10-4100-13	20	20	Lateral flow devices

(a) needs the SVANODIP® FMDVAg Extraction kit for tissue preparation



Comprehensive assay – detects all seven serotypes of the FMD virus

Point of care device with one-step procedure – ideal for outbreak investigations and border controls

Supports laboratory confirmation by pre-selecting index cases

Validated in a comprehensive study on samples from FAO World Reference Lab on FMDV Disease

Field-approved assay – key element of early detection of FMDV in Bulgaria

SVANODIP® FMDV-Ag accurately detects all seven serotypes of FMDV, which is a great benefit in alert situations and reassures at the point of care the veterinary authorities on the accuracy of FMD diagnosis from clinical examination.

Fast and easy- at farm results within 10 minutes

Confidence in alert situations- field guide explains test procedure in pictures

Long storage life of 2 years

High quality - thoroughly validated and manufactured under strict ISO 9001:2008 standardised procedures in Sweden

YOUR SUPPORT

From 9am-4pm CET call:

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PERFORMANCE CHARACTERISTICS SVANODIP® FMDV-Ag

A study coordinated by the United States Department of Agriculture (USDA), reports about an analytical sensitivity of SVANODIP® FMDV-Ag of 93% for bovine and 98.9% for swine. The SVANODIP® FMDV-Ag has correctly identified positive samples up to 11 and 10 day-old vesicular tissue from bovine and swine, respectively. Thus analytical sensitivity was comparable to antigen ELISA.

In a very comprehensive study on 1500 field samples collected by the FAO World Reference Laboratory for FMDV Disease, Pirbright from 1965 to 2008 SVANODIP® FMDV-Ag has correctly classified samples into negative and positive (Ferris et al., 2009). In this study vesicular epithelia and vesicular fluid from suspect cases of FMD from different geographical origins and included antigenic and molecular variation within each of the FMDV serotypes were investigated.

Negative sample	SVANODIP® FMDV-Ag		Ag-ELISA	
	Specificity (%)	N tested	Specificity (%)	N tested
SVDV ^a	100	5	100	5
VSV ^b	100	5	100	5
Negative ^c	100	7	100	7
NVD ^d	99.9	735	99.9	725
NVD ^e	98.4	251	100	251
Total	99.5	1003	99.9	993

Positive samples	SVANODIP® FMDV-Ag		Ag-ELISA	
	Sensitivity (%)	N tested	Sensitivity (%)	N tested
O	92.4	131	95.3	128
A	87.8	41	78.0	41
C	62.5	24	58.3	24
SAT 1	66.7	24	54.2	24
SAT 2	58.8	34	88.2	34
SAT 3	70.0	10	90.0	10
Asia 1	97.5	40	90.0	40
Total	83.6	304	85.0	301

(a) Swine vesicular disease virus epithelial suspensions positive by SVDV antigen ELISA, (b) vesicular stomatitis virus epithelial suspensions positive by VSV antigen ELISA, (c) epithelia from naive animals, (d) no virus detected by virus isolation and antigen ELISA, (e) no virus detected by virus isolation, antigen ELISA or RT-PCR

Reference: Ferris NP, Nordengrahn A, Hutchings GH, Reid SM, King DP, Ebert K, Paton DJ, Kristersson T, Brocchi E, Grazioli S, Merza M. (2009): Development and laboratory validation of a lateral flow device for the detection of foot-and-mouth disease virus in clinical samples. J Virol Methods 155,10-7.

COMPLEMENTARY PRODUCTS for controlling Foot-and-Mouth-Disease

SVANOVIR® FMDV 3ABC-Ab ruminant

Antibody detection in cattle, sheep and goats

IAEA FMDV standard sera

Quality control