OREBA

m

# Validation report DAS-ELISA PVY polyclonal

Article No.:

110577 (PVY polyclonal Complete kit 96) / 110575 (PVY polyclonal Complete kit 480) / 110572 (PVY polyclonal Complete kit 960) / 110580 (PVY polyclonal Complete kit 5000)

## **General information:**

Target Pathogen	PVY (Potato virus Y) polyclonal
Genus	Potyvirus
Method	DAS-ELISA

## Technical information:

Antibodies	Polyclonal antibody developed against an PVY <sup>N</sup> 605 isolate.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "general" Sprouts/tuber samples: 1:10-1:20 (w/v) in extraction buffer "Bulbs & Tubers"
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized PVY infected plant extracts
Working volume	200 μl / well

### Host matrix:

Tested plant material	Leaf, sprouts, tubers
Tested species infected	Solanum tuberosum (Potato) Nicotiana benthamiana (Tobacco) Nicotiana glutinosa (Tobacco) Nicotiana tabacum "Xanthi" (Tobacco)

### **Specificity:**

opeenierty.	
Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	>100
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected isolates / geographic regions (Inclusivity)	PVY <sup>N</sup> 605 (Switzerland, Potato & Tobacco) PVY <sup>N</sup> 605 (France, Tobacco) PVY <sup>N</sup> 605 GFP (France, Tobacco) PVY <sup>N</sup> 605 (UK, Potato) PVY <sup>N</sup> 110/4 (UK, Potato) PVY <sup>N</sup> 2/009 (UK, Potato) PVY <sup>N</sup> 2/029 (UK, Potato) PVY <sup>N</sup> 2/029 (UK, Potato) PVY <sup>N</sup> 2/036 (UK, Potato) PVY <sup>NTN</sup> 59 1317 (Switzerland, Potato) PVY <sup>NTN</sup> 59 1317 (Switzerland, Tobacco) PVY <sup>NTN</sup> 59 1214 (Switzerland, Potato) PVY <sup>NTN</sup> 59 1214 (Switzerland, Potato) PVY <sup>NTN</sup> NIB V001 (Slovenia, Potato) PVY <sup>NTN</sup> D678/18 (Slovenia, Tobacco) PVY <sup>NTN</sup> KUS (UK, Potato) PVY <sup>NTN</sup> 55/1 (UK, Potato)
	PVY <sup>NIN</sup> 2/189 (UK, Potato)

phone

fax

+41 61 712 11 25

+41 61 712 11 17

www.bioreba.com

BIOREBA AG Christoph Merian-Ring 7 CH-4153 Reinach BL1 Switzerland Your Partner in Agro-Diagnostics

admin@bioreba.ch

www.bioreba.com





OREBA

	PVY <sup>NTN</sup> 2/190 (UK, Potato) PVY <sup>NTN</sup> 2/192 (UK, Potato) PVY <sup>N</sup> Wilga 1333 (Switzerland, Potato) PVY <sup>N</sup> Wilga 1333 (Switzerland, Tobacco) PVY <sup>N</sup> Wilga (Poland, Potato) PVY <sup>N</sup> Wilga 2/193 (UK, Potato) PVY <sup>N</sup> Wilga 2/194 (UK, Potato) PVY <sup>N</sup> Wilga 2/195 (UK, Potato) PVY <sup>O</sup> Wilga 2/195 (UK, Potato) PVY <sup>O</sup> 803 (Switzerland, Tobacco) PVY <sup>O</sup> 768 1118 (Switzerland, Tobacco) PVY <sup>O</sup> 2/186 (UK, Potato) PVY <sup>O</sup> 2/187 (UK, Potato) PVY <sup>C</sup> 632 (Switzerland, Tobacco) PVY <sup>C</sup> 509 (Netherlands, Tobacco) W19-094 (Germany, Potato) PV-0343 (Germany, Potato)
Cross reaction with (Exclusivity) No cross reaction tested with (Exclusivity)	None known BYDV (Barley yellow dwarf virus) PLRV (Potato leafroll virus) PVA (Potato virus A) PVM (Potato virus M) PVS (Potato virus S) PVV (Potato virus V) PVX (Potato virus X) Rs ( <i>Ralstonia solanacearum</i> ) TBSV (Tomato bushy stunt virus) WMV-2 (Watermelon mosaic virus 2)
No matrix effect observed with (Selectivity)	Chenopodium quinoa (Quinoa) Physalis peruviana (Cape gooseberry) Solanum muricatum (Pepino) Solanum tuberosum (Potato Leaf, Tuber) Nicotiana tabacum "Xanthi" (Tobacco)

## Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 <sup>-3</sup> dilution of infected tissue (pathogen titer unknown)
Sensitivity on host matrix	PVY on leaves of potato: 1:1'250 dilution PVY on tubers of potato: 1:6'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

#### Validation:

Internal validation	2020 (last internal validation)
External validation	2 proficiency tests (PT) every year (Germany, Ireland).
	Validation by 2 external research partners in 2020 (UK, Slovenia).
Reproducibility	100%
Repeatability	100%

www.bioreba.com

BIOREBA AG Christoph Merian-Ring 7 CH-4153 Reinach BL1 Switzerland Your Partner in Agro-Diagnostics

phone +41 61 712 11 25 fax +41 61 712 11 17 admin@bioreba.ch www.bioreba.com



BIOREBA

Validation information

Validation release Date:

October, 07<sup>th</sup>, 2022

Every year BIOREBA participates with PVY reagents on two external proficiency tests (PT).

In 2020, a larger validation was organized by BIOREBA with two other labs using the reagents since various years.

Internally, the reagents have been validated with the BIOREBA isolate collection.

QC manager:

In

Version: 2 - 09.10.2023 - Adaptions from last version: New detected isolates, Information about sensitivity on host matrix and limit of detection (LoD) added.

fax



BIOREBA AG Christoph Merian-Ring 7 CH-4153 Reinach BL1 Switzerland

Your Partner in Agro-Diagnostics

phone +41 61 712 11 25 +41 61 712 11 17

admin@bioreba.ch www.bioreba.com



