

Validation report

DAS-ELISA PVY monoclonal

Article No.: 112577 (PVY monoclonal Complete kit 96) / 112575 (PVY monoclonal Complete kit 480) / 112572 (PVY monoclonal Complete kit 960) / 112580 (PVY monoclonal Complete kit 5000)

General information:

Target Pathogen	PVY (Potato virus Y / Potyvirus yituberosi)
Genus	<i>Potyvirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Monoclonal antibody developed against the PVY ^N 605 isolate.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". Tuber and sprout samples: 1:10 to 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, tuber, sprout Transmission by vectors (aphids) and mechanical transmission by inoculation.
Tested species infected	<i>Nicotiana tabacum</i> "Xanthi" (Tobacco) <i>Solanum tuberosum</i> (Potato)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	54
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	38
Detected isolates / geographic regions (Inclusivity)	PVY ^N 605 (Switzerland, Tobacco) PVY ^N 605 (Switzerland, Potato) PVY ^{NTN} 59 1317 (Switzerland, Tobacco) PVY ^{NTN} 59 1317 (Switzerland, Potato) PVY ^{NTN} 59 1214 (Switzerland, Potato) PVY ^{NTN} 300107 (Switzerland, Tobacco) PVY ^N Wi-1333 (Switzerland, Potato) PVY ^N Wi-1333 (Switzerland, Tobacco) PVY ^O 803 (Switzerland, Tobacco) PVY ^C 632 (Switzerland, Tobacco) PVY ^C 509 (Netherlands, Potato) PVY ^C 509 (Netherlands, Tobacco) PVY 120820 (Switzerland, Tobacco) PVY N-Ontario (US, Tobacco)
Cross reaction with (Exclusivity)	-

No cross reaction tested with (Exclusivity)	PVY ^o 768 1118 (Switzerland, Tobacco) Reagents can be used to discriminate PVY ^{Ob} subgroup from other PVY subgroups using these reagents on the same assay as BIOREBA PVY monoclonal cocktail reagents or BIOREBA PVY polyclonal reagents BYDV (Barley yellow dwarf virus) PLRV (Potato leafroll virus) PVA (Potato virus A) Rs (Ralstonia solanacearum) WMV-2 (Watermelon mosaic virus-2)
No matrix effect observed with (Selectivity)	<i>Nicotiana tabacum</i> "Xanthi" (Tobacco) <i>Solanum tuberosum</i> (Potato)

Sensitivity:

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

Validation:

Internal validation	2000, 2011
External validation	-
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection, composed of various samples with diverse plant host range, collected within the last 40 years.

Validation release Date:
July 10th, 2026

QC manager:



Version: 1 – 10.07.2026.