Validation report

DAS-ELISA PDV

Article No.: 150677 (PDV Complete kit 96) / 150675 (PDV Complete kit 480) / 150672 (PDV Complete kit 960)

General information:

Target Pathogen	PDV (Prune dwarf virus)
Genus	*Ilarvirus*
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a recombinant coat protein of PDV as well as antibodies made against plum PDV 8/1 isolate from Germany.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "general". Various samples per plant recommended, to increase chance of correct diagnosis. Leaves, flowers, dormant buds, bark of young shoots or seeds throughout the whole year.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized PDV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, Budwood, Seeds
Tested species infected	*Nicotiana clevelandii* (Tobacco) *Prunus ameniaca (Apricot)* *Prunus avium* (Cherry) *Prunus domestica* (Prune) *Prunus persica* (Peach)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	>100 (PT: 100%)
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100 (PT: 100%)
Detected isolates / geographic regions (Inclusivity)	PDV 1385 (Switzerland, Tobacco) PDV "Wm Aesch" (Switzerland, Cherry) PDV "Liestal" (Switzerland, Cherry) PDV "Basler Langstieler" (Switzerland, Cherry) PDV 2185 (Switzerland, Prune) PDV "Schäfer Hochwald" (Switzerland, Cherry) PDV 38811 (Switzerland, Peach) PDV 38812 (Switzerland, Peach) PDV 38814 (Switzerland, Peach) PDV 38815 (Switzerland, Peach) PDV 1/2/3/4 (Switzerland, Tobacco) PDV 41415 (Switzerland, Prune) PDV 41416 (Switzerland, Prune)

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	PDV 42/2019 21/91 (Germany, Unknown) PDV 41/2019 20/91 (Germany, Unknown) PDV 38/2019 26/91 (Germany, Unknown) PDV 12110-AG-16-001 (Switzerland, Prune) PDV 4519 (Switzerland, Apricot) PDV Orangered 34/18 (Switzerland, Prune)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	ArMV (Arabis mosaic virus) ASPV (Apple stem pitting virus) CaMV (Cauliflower mosaic virus) CLRV (Cherry leaf roll virus) GFLV (Grapevine fanleaf virus) PepMV (Pepino mosaic virus) PNRSV (Prunus necrotic ringspot virus) PPV (Plum pox virus) PRSV (Papaya ringspot virus) ToRSV (Tomato ringspot virus) TRSV (Tobacco ringspot virus)
No matrix effect observed with (Selectivity)	*Malus* (Apple) *Nicotiana clevelandii* (Tobacco) *Prunus ameniaca (Apricot)* *Prunus avium* (Cherry) *Prunus domestica* (Prune) *Prunus persica* (Peach)

Sensitivity:

Analytical Sensitivity / LoD	1: 62'500 (Leaf) 1: 12'500 (Budwood)
Sensitivity on host matrix	100%
Other sensitivity characteristics	PT diagnostic sensitivity: 100%

Validation:

Internal validation	2010, 2022-2023
External validation	1 proficiency test (PT) in 2022 with 9 labs (Germany).
Reproducibility	100%
Repeatability	100%
Validation information	Every two years BIOREBA participates with PDV reagents on an external proficiency test (PT). 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:
April, 7th, 2023

QC manager:

Version: 1 – 07.04.2023

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