

Validation report

DAS-ELISA PNRSV

Article No.: 151177 (PNRSV Complete kit 96) / 151175 (PNRSV Complete kit 480) / 151172 (PNRSV Complete kit 960)

General information:

Target Pathogen	PNRSV (Prunus necrotic ringspot viurs)
Genus	<i>Illavirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a PNRSV isolate from plum. The reagents do not distinguish between isolates from plum, cherry, apricot or peach.
Sampling	Samples: 1:20 (w/v) in extraction buffer "general". Detection in 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 PNRSV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, Budwood, Seeds
Tested species infected	<i>Chenopodium Quinoa</i> (Quinoa) <i>Prunus domestica</i> (Plum) <i>Prunus domestica</i> subst. <i>domestica</i> (Prune) <i>Rosa</i> spp. (Rose)

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)	PNRSV 951 (Switzerland, Quinoa) PNRSV 2183 13-14-8 (Switzerland, Prune) PNRSV (Columbia, Rose) PNRSV 41418 (Switzerland, Plum) PNRSV 35/2019 13/86 (Germany) PNRSV 38/2019 26/91 (Germany)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	ApMV (Apple mosaic virus) ASPV (Apple stem pitting virus) GFLV (Grapevine fanleaf virus) PDV (Prune dwarf virus) PPV (Plum pox virus) SMYEPV (Strawberry mild yellow edge virus)

No matrix effect observed with (Selectivity)	<i>Malus</i> (Apple) <i>Prunus ameniaca</i> (Apricot) <i>Prunus avium</i> (Cherry) <i>Prunus domestica</i> (Prune) <i>Prunus persica</i> (Peach)
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Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻³ – 10 ⁻⁴ dilution of infected tissue (pathogen titer unknown)
Sensitivity on host matrix	PNRSV on leaves of plum: 1:6'250 dilution PNRSV on petals of plum: 1:31'250 dilution Pathogen titer unknown
Other sensitivity characteristics	PT diagnostic sensitivity: 100%

Validation:

Internal validation	1994, 2022
External validation	1 proficiency test (PT) in 2022 with 9 labs (Germany).
Reproducibility	100%
Repeatability	100%
Validation information	<p>Every two years BIOREBA participates with PNRSV reagents on an external proficiency test (PT).</p> <p>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.</p>

Validation release Date:
May, 26th, 2023

QC manager:



Version: 2 – 17.07.2024 - Information about sensitivity on host matrix and limit of detection (LoD) added.