

Validation report

DAS-ELISA ASGV

Article No.: 150877 (ASGV Complete kit 96) / 150875 (ASGV Complete kit 480) / 150872 (ASGV Complete kit 960)

General information:

Target Pathogen	ASGV (Apple stem grooving virus) CTLV (Citrus tatter leaf virus) → considered as strain of ASGV
Genus	<i>Capillovirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against different ASGV isolates from apple.
Sampling	1:20 (w/v) in extraction buffer "General". Sampling (season, material) is very important. Low concentration in apple trees.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized ASGV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Petals, forced buds, young leaves, wooden parts
Tested species infected	<i>Chenopodium quinoa</i> (Quinoa) <i>Malus domestica</i> (Apple) <i>Nicotiana occidentalis</i> (Tobacco)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	22
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	82
Detected isolates / geographic regions (Inclusivity)	ASGV PV-0199 (Russia, Quinoa) ASGV 937 (Switzerland, Quinoa) ASGV 1101 (Switzerland, Quinoa) ASGV 1125 (Switzerland, Tobacco) ASGV 38855 (Switzerland, Apple) ASGV 38856-57 (Switzerland, Apple) ASGV 38861-63 (Switzerland, Apple) ASGV Golden 2111 13-3-9 (Switzerland, Apple) ASGV Golden 2112 13-3-8 (Switzerland, Apple)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	Aac (<i>Acidovorax avenae</i> subsp. <i>citrulli</i>) ApP (Apple proliferation phytoplasma) ASPV (Apple stem pitting virus) BNYVV (Beet necrotic yellow vein virus) BYDV (Barley yellow dwarf virus) CaMV (Cauliflower mosaic virus)

	CLRV (Cherry leaf roll virus) GFLV (Grapevine fanleaf virus) GLRaV-3 (Grapevine leafroll-associated virus 3) PeAMV (Petunia asteroid mosaic virus) ToANV (Tomato apex necrosis virus)
No matrix effect observed with (Selectivity)	<i>Chenopodium quinoa</i> (Quinoa) <i>Malus domestica</i> (Apple) <i>Prunus armeniaca</i> (Apricot) <i>Rubus idaeus</i> (Raspberry)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻⁴ dilution of infected tissue (pathogen titer unknown)
Sensitivity on host matrix	ASGV on leaves of quinoa: 1:31'250 dilution ASGV on leaves of apple: 1:31'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	1994, 2002, 2009 (last internal validation)
External validation	-
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection composed of various samples collected within the last 40 years.

Validation release Date:
June, 12th, 2023

QC manager:



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