

Validation report

DAS-ELISA ACLSV

Article No.: 151077 (ACLSV Complete kit 96) / 151075 (ACLSV Complete kit 480) / 151072 (ACLSV Complete kit 960)

General information:

Target Pathogen	ACLSV (Apple chlorotic leaf spot virus)
Genus	<i>Trichovirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against ACLSV isolate from apple and monoclonal antibodies developed against a recombinant ACLSV coat protein.
Sampling	1:20 (w/v) in extraction buffer "General". Sampling (season, material) is very important.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized ACLSV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Petals, forced buds, young leaves, wooden parts
Tested species infected	<i>Malus domestica</i> (Apple) <i>Prunus avium</i> (Cherry) <i>Prunus persica</i> (Peach) <i>Pyrus communis</i> (Pear) <i>Chenopodium amaranticolor</i> (Tree spinach) <i>Chenopodium quinoa</i> (Quinoa) <i>Nicotiana occidentalis</i> (Tobacco)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	14
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected isolates / geographic regio 6534ns (Inclusivity)	ACLSV 241002 (Switzerland, Tobacco) ACLSV 6534 (Switzerland, Apple) ACLSV 7559 (Switzerland, Apple) ACLSV 260423 (Switzerland, Apple) ACLSV 6573 (Switzerland, Tree Spinach) ACLSV 1138 (Switzerland, Tobacco) ACLSV 40826 (Cherry, Switzerland) ACLSV 37843 (Switzerland, Apple) ACLSV 41413 (Switzerland, Peach) ACLSV 41411 (Switzerland, Peach) ACLSV 1417 (Switzerland, Tree Spinach) ACLSV BI-009-24 (Switzerland, Apple) ACLSV 027-25 (Switzerland, Pear)

	ACLSV 027-25 (Switzerland, Apple)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	ASPV (Apple stem pitting virus) ASGV (Apple stem grooving virus) PPV (Plum pox virus) PDV (Prune dwarf virus) PNRSV (Prunus necrotic ringspot virus) ApMV (Apple proliferation phytoplasma)
No matrix effect observed with (Selectivity)	<i>Chenopodium quinoa</i> (Quinoa) <i>Malus domestica</i> (Apple) <i>Nicotiana occidentalis</i> (Tobacco) <i>Prunus armeniaca</i> (Apricot) <i>Prunus avium</i> (Cherry) <i>Prunus domestica</i> (Plum) <i>Prunus persica</i> (Peach) <i>Pyrus communis</i> (Pear)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻² -10 ⁻⁴ dilution of infected tissue (pathogen titer unknown)
Sensitivity on host matrix	ACLSV on petals of apple: 1:31'250 dilution ACLSV on leaves of apple: 1:250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	2025
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:
July, 20th, 2025

QC manager:



Version: 3 – 18.07.2025 – Change of antibody composition and new validation.