# 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** | *Trichovirus* |
| **Method** | DAS-ELISA |

**Technical information:**

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|---|---|
| **Antibodies** | Polyclonal antibodies developed against two different ACLSV isolates from apple. |
| **Sampling** | 1:20 (w/v) in extraction buffer "General".<br>Sampling (season, material) is very important. |
| **Controls** | Negative control (NC): lyophilized extracts from healthy plants<br>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** | *Chenopodium quinoa* (Quinoa)<br>*Malus domestica* (Apple)<br>*Nicotiana occidentalis* (Tobacco)<br>*Prunus avium* (Cherry)<br>*Prunus persica* (Peach)<br>*Pyrus communis* (Pear) |

**Specificity:**

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|---|---|
| **Analytical Specificity** | 100% |
| **Number of tested samples from target organism (True Positives)** | 42 |
| **Diagnostic Specificity** | 100% |
| **Number of tested samples non-target organism (True Negatives)** | >100 |
| **Detected isolates / geographic regions (Inclusivity)** | ACLSV 1138 (Switzerland, Apple)<br>ACLSV 1138 (Switzerland, Tobaco)<br>ACLSV 1115 (Switzerland, Cherry)<br>ACLSV 1115 (Switzerland, Quinoa)<br>ACLSV 1379 (Switzerland, Quinoa)<br>ACLSV 317 (Switzerland, Peach)<br>ACLSV 2104 13-3-5 (Switzerland, Apple)<br>ACLSV (France, Apple)<br>ACLSV 37843 (Switzerland, Apple)<br>ACLSV 41411-14 (Switzerland, Peach)<br>ACLSV 40826 (Switzerland, Apple)<br>ACLSV 40806 (Switzerland, Pear)<br>ACLSV 40827 (Switzerland, Cherry)<br>ACLSV 41414 (Switzerland, Peach)<br>ACLSV 37813 (Switzerland, Apple) |



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| | |
|---|---|
| | ACLSV 27+28 (Switzerland, Apple) |
| **Cross reaction with (Exclusivity)** | None known |
| **No cross reaction tested with (Exclusivity)** | ASPV (Apple stem pitting virus)<br>BYDV (Barley yellow dwarf virus)<br>CaMV (Cauliflower mosaic virus)<br>GLRaV-1 (Grapevine leafroll-associated virus 1)<br>LMV (Lettuce mosaic virus)<br>PLRV (Potato leafroll virus)<br>PMTV (Potato mop-top virus)<br>PVA (Potato virus A)<br>PVS (Potato virus S)<br>TBRV (Tomato black ring virus)<br>ToANV (Tomato apex necrosis virus) |
| **No matrix effect observed with (Selectivity)** | *Chenopodium quinoa* (Quinoa)<br>*Malus domestica* (Apple)<br>*Nicotiana occidentalis* (Tobacco)<br>*Prunus armeniaca* (Apricot)<br>*Prunus avium* (Cherry)<br>*Prunus domestica* (Plum)<br>*Prunus persica* (Peach)<br>*Pyrus communis* (Pear) |

**Sensitivity:**

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|---|---|
| **Diagnostic Sensitivity** | 100% |
| **Analytical Sensitivity / LoD** | $10^{-3}$ dilution of infected tissue (pathogen titer unknown) |
| **Sensitivity on host matrix** | ACLSV on petals of apple: 1:1'250 dilution<br>Pathogen titer unknown |
| **Other sensitivity characteristics** | - |

**Validation:**

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|---|---|
| **Internal validation** | 2001, 2017 (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:



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