

# Validation report

## DAS-ELISA SLRSV

Article No.: 151677 (SLRSV Complete kit 96) / 151675 (SLRSV Complete kit 480) / 151672 (SLRSV Complete kit 960)

### General information:

|                 |                                          |
|-----------------|------------------------------------------|
| Target Pathogen | SLRSV (Strawberry latent ringspot virus) |
| Genus           | <i>Stralarivirus</i>                     |
| Method          | DAS-ELISA                                |

### Technical information:

|                |                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Antibodies     | Polyclonal antibodies developed against SLRSV isolates from peach and mint.                                                         |
| Sampling       | Grapevine: 1:10 (w/v) in extraction buffer "Grapevine"<br>Other plants: 1:20 (w/v) in extraction buffer "General"                   |
| Controls       | Negative control (NC): lyophilized extracts from healthy plants<br>Positive control (PC): lyophilized SLRSV infected plant extracts |
| Working volume | 200 µl / well                                                                                                                       |

### Host matrix:

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tested plant material   | Leaf and bark (phloem)<br>Sap-transmissible, nematodes ( <i>Xiphinema</i> spcc.), seed-transmissible                                                                                                                                                                                                                                                                                                                                                 |
| Tested species infected | <i>Chenopodium quinoa</i> (Quinoa)<br><i>Clematis</i> (Woodland vines)<br><i>Fragaria vesca</i> (Strawberry)<br><i>Lilium</i> sp. (Lilies)<br><i>Mentha gentilis</i> (Ginger mint)<br><i>Nicotiana benthamiana</i> (Tobacco)<br><i>Phaseolus vulgaris</i> (Bean)<br><i>Prunus persica</i> (Peach)<br><i>Robinia pseudoacacia</i> (Robinia)<br><i>Rosa rugosa</i> (Rose)<br><i>Rubus fruticosus</i> (Blackberry)<br><i>Vitis vinifera</i> (Grapevine) |

### Specificity:

|                                                                |                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Analytical Specificity                                         | 100%                                                                                                                                                                                                                                                                        |
| Number of tested samples from target organism (True Positives) | >100                                                                                                                                                                                                                                                                        |
| Diagnostic Specificity                                         | 100%                                                                                                                                                                                                                                                                        |
| Number of tested samples non-target organism (True Negatives)  | >100                                                                                                                                                                                                                                                                        |
| Detected isolates / geographic regions (Inclusivity)           | SLRSV 1005 (Switzerland, Quinoa)<br>SLRSV 997 (Switzerland, Quinoa)<br>SLRSV 34198 (Switzerland, Grapevine)<br>SLRSV 34199 (Switzerland, Grapevine)<br>SLRSV 38004 (Switzerland, Grapevine)<br>SLRSV 38005 (Switzerland, Grapevine)<br>SLSRV 40497 (Switzerland, Grapevine) |

|                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                              | SLRSV GF 305 27862-27866 (Switzerland, Peach)<br>SLRSV 11092 (Switzerland, Blackberry)<br>SLRSV 1391 5875017 (Netherlands, Quinoa)<br>SLRSV 1391 5875017 (Netherlands, Lily)<br>SLRSV 1390 4226509 (Netherlands, Quinoa)<br>SLRSV 1390 4226509 (Netherlands, Tobacco)<br>SLRSV T35 (France, Grapevine)<br>SLRSV 12-001 (Netherlands, Lily)<br>SLRSV 14-021 (Norway, woodland vines)<br>SLRSV 14-022 (New Zealand, Blackberry)<br>SLRSV 14-023 (Germany, Strawberry)<br>SLRSV 14-024 (Netherlands, Bean)<br>SLRSV 14-025 (Netherlands, Rose)<br>SLRSV 14-026 (Netherlands, Rose)<br>SLRSV 14-027 (Poland, Robinia)<br>SLRSV 15-017 5674880 (France, Peach)<br>SLRSV 15-018 5674899 (Switzerland, Blackberry)<br>SLRSV NCGR MEN 454.001 (US, Ginger-Mint) |
| Cross reaction with (Exclusivity)            | <u><b>SLRSV-C:</b></u><br>LycMoV (Lychnis mottle virus)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| No cross reaction tested with (Exclusivity)  | APMoV (Andean potato mottle virus)<br>ArMV (Arabidopsis mosaic virus)<br>BYDV (Barley yellow dwarf virus)<br>CaMV (Cauliflower mosaic virus)<br>CLRV (Cherry leaf roll virus)<br>CTV (Citrus tristeza virus)<br>GFkV (Grapevine fleck virus)<br>GFLV (Grapevine fanleaf virus)<br>GLRaV-1 (Grapevine leafroll-associated virus 1)<br>GLRaV-3 (Grapevine leafroll-associated virus 3)<br>GVA (Grapevine virus A)<br>PLRV (Potato leafroll virus)<br>PMMoV (Pepper mild mottle virus)<br>PVM (Potato virus M)<br>PVS (Potato virus S)<br>RpRSV (Raspberry ringspot virus)<br>TBRV (Tomato black ring virus)<br>ToRSV (Tomato ringspot virus)                                                                                                              |
| No matrix effect observed with (Selectivity) | <i>Fragaria vesca</i> (Strawberry)<br><i>Narcissus</i> sp. (Narcissus)<br><i>Prunus domestica</i> (Plum)<br><i>Prunus persica</i> (Peach)<br><i>Rubus fruticosus</i> (Blackberry)<br><i>Vitis vinifera</i> (Grapevine)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

**Sensitivity:**

|                                   |                                                                                                                           |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Diagnostic Sensitivity            | 100%                                                                                                                      |
| Analytical Sensitivity / LoD      | 10 <sup>-2</sup> to 10 <sup>-3</sup> dilution of infected tissue (pathogen titer unknown)                                 |
| Sensitivity on host matrix        | SLRSV on leaves of grapevine: 1:250 dilution<br>SLRSV on leaves of blackberry: 1:1'250 dilution<br>Pathogen titer unknown |
| Other sensitivity characteristics | -                                                                                                                         |

**Validation:**

|                               |                                                                                                                                                  |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Internal validation</b>    | 2015 and 2021 (last internal validation)                                                                                                         |
| <b>External validation</b>    | Validation by 1 external research partner in 2021 (NL).                                                                                          |
| <b>Reproducibility</b>        | 100%                                                                                                                                             |
| <b>Repeatability</b>          | 100%                                                                                                                                             |
| <b>Validation information</b> | Internally, the reagents have been validated with the BIOREBA isolate collection composed of various samples collected within the last 40 years. |

Validation release Date:  
May, 22<sup>nd</sup>, 2023

QC manager:



Version: 3 – 12.08.2026 – New Information about sensitivity on host matrix and limit of detection (LoD) for the detection in blackberry added.