

Validation report

DAS-ELISA SMV

Article No.: 162677 (SMV Complete kit 96) / 162675 (SMV Complete kit 480) / 162672 (SMV Complete kit 960)

General information:

Target Pathogen	SMV (Soybean mosaic virus / Potyvirus glycitessellati)
Genus	<i>Potyvirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a recombinant coat protein of SMV.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". Seed samples: 1:25 (w/v) in extraction buffer "General" with overnight pre-soaking before homogenization.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized SMV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, seed Seed transmission is possible. Transmission by vectors (thrips) and mechanical transmission.
Tested species infected	<i>Glycine max</i> (Soybean) <i>Passiflora edulis</i> (Passion fruit/Maracuja) <i>Passiflora tarminiana</i> (Banana passion fruit/Curuba)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	94
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	69
Detected isolates / geographic regions (Inclusivity)	SMV 1373 (Switzerland, Soybean) SMV 200417 (Columbia, Passion fruit) SMV 250418 (Columbia, Passion fruit) SMV 040518 (Columbia, Curuba) SMV 021120 (Germany, Soybean) SMV 201220 (Germany, Soybean) SMV N (US, Soybean) SMV G7 (US, Soybean) SMV G7d (US, Soybean)
Cross reaction with (Exclusivity)	Weak cross-reaction with the following potyvirus members was tested: BCMV (Bean common mosaic virus) BCMNV (Bean common mosaic necrosis virus) LYSV (Leek yellow stripe virus) PVY (Potato virus Y)

	WMV-2 (Watermelon mosaic virus 2) ZYMV (Zucchini yellow mosaic virus) Additional weak cross-reactions of members of the potyvirus family are possible.
No cross reaction tested with (Exclusivity)	CGMMV (Cucumber green mottle mosaic virus) GLRaV-2 (Grapevine leafroll-associated virus 2) GPGV (Grapevine pinot gris virus) MiLBVV (Mirafiori lettuce big-vein virus) PPV (Plum pox virus) PRSV (Papaya ringspot viurs) PVA (Potato virus A) Rs (<i>Ralstonia solanacearum</i>) SCMV (Sugarcane mosaic virus) SLRSV (Strawberry latent ringspot virus) ToMV (Tomato mosaic virus) TuMV (Turnip mosaic virus)
No matrix effect observed with (Selectivity)	<i>Glycine max</i> (Soybean) <i>Passiflora edulis</i> (Passion fruit / Maracuja) <i>Phaseolus vulgaris</i> (Bean) <i>Physalis peruviana</i> (Physalis) <i>Vigna radiata</i> (Mung bean)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻³ dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	SMV on leaves of soybean: 1:6'250 dilution Pathogen titer unknown
Other sensitivity characteristics	-

Validation:

Internal validation	2017, 2019
External validation	2017 (US)
Reproducibility	100%
Repeatability	100%
Validation information	Internally, the reagents have been validated with the BIOREBA isolate collection, composed of various samples with diverse plant host range.

Validation release Date:
May 26th, 2026

QC manager:



Version: 1 – 26.05.2026.