

Validation report

DAS-ELISA SqMV

Article No.: 160977 (SqMV Complete kit 96) / 160975 (SqMV Complete kit 480) / 160972 (SqMV Complete kit 960)

General information:

Target Pathogen	SqMV (Squash mosaic virus / Comovirus cucurbitae)
Genus	<i>Comovirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a SqMV isolate from melon.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". Detection during active growing season in symptomatic leaves is the best source for testing.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized SqMV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, seed Seed transmission is possible. Transmission by vectors (chrysomelid beetles) and mechanical transmission by inoculation.
Tested species infected	<i>Chenopodium quinoa</i> (Quinoa) <i>Cucurbita pepo</i> subsp. <i>pepo</i> convar. <i>giromontiina</i> (Zucchini)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	24
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	63
Detected isolates / geographic regions (Inclusivity)	SqMV 1083 (Switzerland, Zucchini) SqMV 080499 (Switzerland, Zucchini) SqMV 300516 (Switzerland, Zucchini) SqMV 080616 (Switzerland, Quinoa) SqMV 080616 (Switzerland, Zucchini) SqMV 140616 (Switzerland, Quinoa) SqMV 210616 (Switzerland, Quinoa)
Cross reaction with (Exclusivity)	-
No cross reaction tested with (Exclusivity)	CCYV (Cucurbit chlorotic yellows virus) CGMMV (Cucumber green mottle mosaic virus) CMV (Cucumber mosaic virus) CYSVDV (Cucumber yellow stunting disorder virus) GFLV (Grapevine fanleaf virus) TMV (Tobacco mosaic virus)

	ToRSV (Tomato ringspot virus) WmCSV (Watermelon chlorotic stunt virus) WMV-2 (Watermelon mosaic virus 2) ZYMV (Zucchini yellow mosaic virus)
No matrix effect observed with (Selectivity)	<i>Chenopodium quinoa</i> (Quinoa) <i>Cucumis sativus</i> (Cucumber) <i>Cucurbita pepo</i> (Pumpkin) <i>Cucurbita pepo</i> subsp. <i>pepo</i> convar. <i>giromontiina</i> (Zucchini) <i>Momordica charantia</i> (Bitter melon) <i>Nicotiana occidentalis</i> (Tobacco)

Sensitivity:

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

Validation:

Internal validation	1998
External validation	-
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, collected within the last 40 years.

Validation release Date:
April 17th, 2026

QC manager:



Version: 1 – 17.04.2026.