

Validation report

DAS-ELISA WMV-2

Article No.: 161177 (WMV-2 Complete kit 96) / 161175 (WMV-2 Complete kit 480) /
161172 (WMV-2 Complete kit 960)

General information:

Target Pathogen	WMV-2 (Watermelon mosaic virus 2 / Potyvirus citrulli)
Genus	<i>Potyvirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against a WMV-2 isolate from zucchini in Switzerland (conjugate) and a WMV-2 isolated from the US (coat).
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". The best time for sampling cucurbits is with actively growing plants.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized WMV-2 infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, seeds Transmission by vectors (aphids) and mechanical transmission.
Tested species infected	<i>Cucumis melo</i> (Melon) <i>Cucumis metuliferus</i> (Horned melon / Kiwano) <i>Cucumis sativus</i> (Cucumber) <i>Cucurbita pepo</i> (Pumpkin) <i>Cucurbita pepo</i> subsp. <i>giromontiina</i> (Zucchini)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	72
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected isolates / geographic regions (Inclusivity)	WMV-2 1082 (Switzerland, Zucchini) WMV-2 1082 (Switzerland, Kiwano) WMV-2 170817 (Switzerland, Zucchini) WMV-2 090719 (Switzerland, Zucchini)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	Aac (Acidovorax avenae subsp. citrulli) AMV (Alfalfa mosaic virus) ASGV (Apple stem grooving virus) CCYV (Cucurbit chlorotic yellows virus) CGMMV (Cucumber green mottle mosaic virus) CMV (Cucumber mosaic virus)

	CYSDV (Cucumber yellow stunting disorder virus) PVS (Potato virus S) SqMV (Squash mosaic virus) TMV (Tobacco mosaic virus) ToANV (Tomato apex necrosis virus) ToRSV (Tomato ringspot virus) WmCSV (Watermelon chlorotic stunt virus) ZYMV (Zucchini yellow mosaic virus)
No matrix effect observed with (Selectivity)	<i>Citrullus lanatus</i> (Watermelon) <i>Cucumis metuliferus</i> (Horned melon / Kiwano) <i>Cucumis sativus</i> (Cucumber) <i>Cucurbita pepo</i> (Pumpkin) <i>Cucurbita pepo</i> subsp. <i>Pepo</i> convar. <i>giromontiina</i> (Zucchini) <i>Solanum lycopersicum</i> (Tomato)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10 ⁻³ dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	WMV-2 on leaves of zucchini: 1:6'250 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.