Validation report

DAS-ELISA ZYMV

Article No.: 161277 (ZYMV Complete kit 96) / 161275 (ZYMV Complete kit 480) / 161272 (ZYMV Complete kit 960)

General information:

Target Pathogen	ZYMV (Zucchini yellow mosaic virus / Potyvirus cucurbitaflavitesselati)
Genus	*Potyvirus*
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal antibodies developed against ZYMV isolates from Switzerland (coat) and US (conjugate).
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". Symptomatic leaves are the best source for testing. The best time for sampling is actively growing plants.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized ZYMV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, Seeds Transmission by vectors (aphids).
Tested species infected	*Cucumis sativus* (Cucumber) *Cucurbita maxima* (Pumpkin) *Cucumis melo* (Melon) *Cucurbita pepo* (Pumpkin) *Cucurbita pepo* subsp. *Pepo* convar. *giromontiina* (Zucchini)

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)	ZYMV 1270 (Switzerland, Zucchini) ZYMV 070199 (Switzerland, Cucumber) ZYMV 090712 (Switzerland, Zucchini) ZYMV 100919 (Switzerland, Zucchini) ZYMV 071019 (Switzerland, Zucchini) ZYMV 141019 (Switzerland, Zucchini) ZYMV 130921 (Switzerland, Pumpkin) ZYMV 051022 (Switzerland, Cucumber)
Cross reaction with (Exclusivity)	None known
No cross reaction tested with (Exclusivity)	Aac (*Acidovorax avenae* subsp. *citrulli*) APMoV (Andean potato mottle virus) ArMV (Arabis mosaic virus)

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	ASGV (Apple stem grooving virus) ASPV (Apple stem pitting virus) BYDV (Barley yellow dwarf virus) CCYV (Cucurbit chlorotic yellows virus) CGMMV (Cucumber green mottle mosaic virus) CMV (Cucumber mosaic virus) CYSDV (Cucumber yellow stunting disorder virus) PVV (Potato virus V) RpRSV (Raspberry ringspot virus) SqMV (Squash mosaic virus) TMV (Tobacco mosaic virus) ToRSV (Tomato ringspot virus) WmCSV (Watermelon chlorotic stunt virus) WMV-2 (Watermelon mosaic virus-2)
No matrix effect observed with (Selectivity)	*Cucumis sativus* (Cucumber) *Cucurbita maxima* (Pumpkin) *Cucumis melo* (Melon) *Cucurbita pepo* (Pumpkin) *Cucurbita pepo* subsp. *Pepo* convar. *giromontiina* (Zucchini) *Momordica charantia* (Bitter melon) *Nicotiana occidentalis* (Tobacco)

Sensitivity:

Diagnostic Sensitivity	100%
Analytical Sensitivity / LoD	10^{-4} dilution of infected tissue (pathogen titer unknown).
Sensitivity on host matrix	ZYMV 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 30th, 2026

QC manager:

Version: 1 – 30.04.2026.

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