

Validation report

DAS-ELISA LMV

Article No.: 160577 (LMV Complete kit 96) / 160575 (LMV Complete kit 480) / 160572 (LMV Complete kit 960)

General information:

Target Pathogen	LMV (Lettuce mosaic virus / Potyvirus lactucae)
Genus	<i>Potyvirus</i>
Method	DAS-ELISA

Technical information:

Antibodies	Polyclonal (coat) and monoclonal (conjugate) antibodies developed against the LMV-R (LMV 1070) isolate from firestone plants in US.
Sampling	Leaf samples: 1:20 (w/v) in extraction buffer "General". Seed samples: 1:20 (w/v) in extraction buffer "Bulbs & Tubers". For testing seeds, we recommend presoaking them for 4h or overnight in extraction buffer before homogenization.
Controls	Negative control (NC): lyophilized extracts from healthy plants Positive control (PC): lyophilized LMV infected plant extracts
Working volume	200 µl / well

Host matrix:

Tested plant material	Leaf, seed Seed transmission is possible. Transmission by vectors (aphids).
Tested species infected	<i>Lactuca sativa</i> (Lettuce) <i>Nicotiana benthamiana</i> (Tobacco)

Specificity:

Analytical Specificity	100%
Number of tested samples from target organism (True Positives)	77
Diagnostic Specificity	100%
Number of tested samples non-target organism (True Negatives)	>100
Detected isolates / geographic regions (Inclusivity)	LMV 1215 (Switzerland, Tobacco) LMV 1264 (Switzerland, Tobacco) LMV-R / LMV 1070 (US, Lettuce) LMV-R / LMV 1070 (Switzerland, Tobacco) LMV 1386 (Switzerland, Lettuce) LMV 1386 (Switzerland, Tobacco) LMV 090414 (Switzerland, Lettuce) LMV 170516 (US, Lettuce seeds) LMV 021116 (Switzerland, Tobacco) LMV 141116 (Switzerland, Tobacco) LMV 080121 (France, Lettuce seeds) LMV 270121 (Germany, Lettuce seeds) LMV 120221 (Switzerland, Lettuce seeds) LMV 260221 (Switzerland, Lettuce seeds)

	LMV 150721 (Switzerland, Lettuce) LMV 090821 (Switzerland, Lettuce) LMV 091222 (Switzerland, Lettuce seeds)
Cross reaction with (Exclusivity)	-
No cross reaction tested with (Exclusivity)	ACLSV (Apple chlorotic leaf spot virus) TBRV (Tomato black ring virus)
No matrix effect observed with (Selectivity)	<i>Lactuca sativa</i> (Lettuce)

Sensitivity:

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

Validation:

Internal validation	2005, 2017
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.