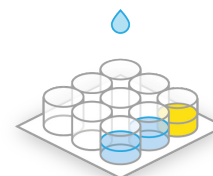


Validation Report: ELISA

SRA/PSA 57400 • *Tobacco mosaic virus* (TMV)



Test Characteristics

Test Name	Tobacco mosaic virus	Capture Antibody	Polyclonal (rabbit)
Catalog Number	57400	Detection Antibody	Polyclonal (rabbit)
Acronym	TMV	Format	DAS-ELISA
Genus	Tobamovirus	Diluents	GEB/ECI
		Sample Dilution	1:10

Summary

This ELISA test is a qualitative serological assay for detection of Tobacco mosaic virus (TMV), the causal agent of Tobacco mosaic disease, in crops including vegetables, fruits, and ornamentals. TMV is a member of the Tobamovirus genus known for their rod-shaped virus particles. This ELISA has a wide cross-reactivity with other Tobamoviruses.

Diagnostic Sensitivity

True Positives	142
Correct Diagnoses	141
Percent	99.3%

Analytical Sensitivity

Limit of Detection: 1:2,624,400 dilution of infected tissue (pathogen titer unknown)

Analytical Specificity

Inclusivity:

This assay was designed to detect all strains and isolates of TMV. One hundred forty-one distinct samples of TMV have been experimentally proven to be detected including samples of TMV-c.

Exclusivity:

Cross-reacts With:

Cucumber green mild mottle virus (CGMMV)	Kyuri green mottle mosaic virus (KGMMV)
Odontoglossum ringspot virus (ORSV)	Pepper mild mottle virus (PMMoV)
Ribgrass mosaic virus (RMV) ¹	Sunn-hemp mosaic virus (SHMV)
Tobacco mild green mosaic virus (TMGMV) ¹	Tomato brown rugose fruit virus (ToBRFV)
Tomato mosaic virus (ToMV)	Tomato mottle mosaic virus (ToMMV) ²
Turnip vein-clearing virus (TVCV) ¹	

¹Likely cross-reacting pathogens that have tested positive with the assay, and partially confirmed with PCR and sequencing.

²ToMMV has been externally reported to be detected.



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Diagnostic Specificity

True Negatives: 104
Correct Diagnoses: 104
Percent: 100%

Selectivity: No Matrix Effect Observed With:

Chenopodium quinoa	Pepper
Geranium	Petunia
Impatiens	Strawflower
Tobacco	Tomato

Repeatability

Number of Samples 30
Replicates per Sample 3
Average Percent Agreement
Between Replicates 100%

Reproducibility

Number of Samples 30
Replicates per Sample 3
Number of Operators 2
Average Percent Agreement Between
Replicates Between Operators 100%



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