

Validation Report: ELISA

PSA/SRA 53500 • *Papaya ringspot virus* (PRSV)



Test Characteristics

Test Name	Papaya ringspot virus	Capture Antibody	Polyclonal (rabbit)
Catalog Number	53500	Detection Antibody	Polyclonal (rabbit)
Acronym	PRSV	Format	DAS-ELISA
Genus	Potyvirus	Diluents	GEB/ECI
		Sample Dilution	1:10

Summary

This ELISA test is a qualitative serological assay for the detection of Papaya ringspot virus (PRSV) in fruit, ornamental, and vegetable tissues. PRSV is a member of the Potyvirus genus known for their non-enveloped, flexuous, filamentous virus particles.

Diagnostic Sensitivity

True Positives	58
Correct Diagnoses	57
Percent	98.3%

Analytical Sensitivity

Limit of Detection: 1:64,800 dilution of infected tissue (pathogen titer unknown)

Analytical Specificity

Inclusivity:

This assay was designed to detect all strains and isolates of PRSV. Fifty-seven distinct samples of PRSV have been experimentally proven to be detected.

Exclusivity:

Cross-reacts With:

None known	
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Does Not Cross-react With:

Alfalfa mosaic virus (AMV)	Tomato chlorotic spot virus (TCSV)
Cucumber green mottle mosaic virus (CGMMV)	Tobacco mosaic virus (TMV)
Cucumber mosaic virus (CMV)	Tomato ringspot virus (ToRSV)
Cucurbit yellow stunting disorder virus (CYSDV)	Tobacco ringspot virus (TRSV)
Groundnut ringspot virus (GRSV)	Tomato spotted wilt virus (TSWV)
Impatiens necrotic spot virus (INSV)	Watermelon mosaic virus (WMV)
Kyuri green mottle mosaic virus (KGMMV)	Watermelon silver mottle virus (WSMoV)
Pepino mosaic virus (PepMV)	Zucchini yellow mosaic virus (ZYMV)
Squash mosaic virus (SqMV)	



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Diagnostic Specificity

True Negatives 102
Correct Diagnoses 96
Percent 94.1%

Selectivity:

No Matrix Effect Observed With:			
C. armaranticolor leaves	Melon leaves	Pepper leaves	Tobacco leaves
Cucumber leaves	Nandina leaves	Pepper Stems	Tomato leaves
Geranium leaves ¹	Nemesia leaves	Pumpkin leaves	Vinca leaves
Kalanchoe leaves ²	Papaya leaves	Raspberry leaves ³	Zucchini leaves
Lobelia leaves	Peach leaves	Squash leaves	
¹ One false positive observed in Geranium leaves			
² One false positive observed in Kalanchoe leaves			
³ One false positive observed in Raspberry leaves			

Repeatability

Number of Samples 48
Replicates per Sample 2
Average Percent Agreement 100.0%
Between Replicates



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