

Validation Report: ELISA

PSA/SRA 44700 • *Cucumber mosaic virus* - subgroup I (CMV I)



Test Characteristics

Test Name	Cucumber mosaic virus - subgroup I	Capture Antibody	Polyclonal (Rabbit)
Catalog Number	44700	Detection Antibody	Monoclonal (Mouse)
Acronym	CMV I	Format	TAS-ELISA
Genus	Cucumovirus	Diluents	GEB/ECI
		Sample Dilution	1:10

Summary

This ELISA test is a qualitative serological assay for the detection of Cucumber mosaic virus - subgroup I (CMV I) in cucurbit leaves. CMV I is a member of the Cucumovirus genus known for their non-enveloped, spherical virus particles.

Diagnostic Sensitivity

True Positives	78
Correct Diagnoses	78
Percent	100%

Analytical Sensitivity

Limit of Detection: 1:3,038 dilution of infected tissue (pathogen titer unknown)

Analytical Specificity

Inclusivity:

Isolates and Geographic Regions Detected:

CMV-1 (USA)	CMV-16 (Taiwan)
CMV-1A1 (IL, USA)	CMV-2A1 (IL, USA)
CMV-A1a1 (AL, USA)	CMV-A1a3 (AL, USA)
CMV ATCC® PV-29™ (WI, USA)	CMV ATCC® PV-30™ (MD, USA)
CMV ATCC® PV-453™ (CA, USA)	CMV ATCC® PV-539™ (CA, USA)
CMV ATCC® PV-540™ (Japan)	CMV ATCC® PV-543™ (Japan)
CMV ATCC® PV-544™ (NJ, USA)	CMV ATCC® PV-545™ (NJ, USA)
CMV ATCC® PV-546™ (United Kingdom)	CMV ATCC® PV-547™ (NY, USA)
CMV ATCC® PV-548™ (NY, USA)	CMV ATCC® PV-59™ (AZ, USA)
CMV-BCM (Taiwan)	CMV-C105 (MI, USA)
CMV-C107 (IN, USA)	CMV-C109 (CA, USA)
CMV-C297 (AZ, USA)	CMV-C310 (N890) (GA, USA)
CMV-D (France)	CMV-F10 (Taiwan)
CMV-Fny (NY, USA)	CMV-ICS (Indonesia)
CMV-Ixora (Philippines)	CMV-M48 (Taiwan)
CMV-Ma1 (USA)	CMV-N-1A (NY, USA)



Agdia, Inc.
52642 County Road 1
Elkhart, IN 46514
574-264-2014 / 800-622-4342
www.agdia.com / info@agdia.com

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Isolates and Geographic Regions Detected:

CMV-N-1B (NY, USA)	CMV-NT4 (Taiwan)
CMV-NT9 (Taiwan)	CMV-O (Australia)
CMV-O69 (FL, USA)	CMV-P1018 (Taiwan)
CMV-P117 (Taiwan)	CMV-P1347 (Taiwan)
CMV-P1360 (Taiwan)	CMV-P1369 (Taiwan)
CMV-P1370 (Taiwan)	CMV-P1441 (Taiwan)
CMV-P1471 (Taiwan)	CMV-P1624 (Taiwan)
CMV-P1628 (Taiwan)	CMV-P184 (Taiwan)
CMV-P1886 (Taiwan)	CMV-P1927 (Taiwan)
CMV-P1929 (Taiwan)	CMV-P212 (Taiwan)
CMV-P2469 (Taiwan)	CMV-P2853 (Taiwan)
CMV-P2874 (Taiwan)	CMV-P2875 (Taiwan)
CMV-P2878 (Taiwan)	CMV-P3 (Taiwan)
CMV-P427 (Taiwan)	CMV-P522 (Taiwan)
CMV-P600 (Taiwan)	CMV-P652 (Taiwan)
CMV-P661 (Taiwan)	CMV-P888 (Taiwan)
CMV-P922	CMV-P959 (Taiwan)
CMV-Peet (Taiwan)	CMV-RS12 (Taiwan)
CMV-S2A (NY, USA)	CMV-Sny (NY, USA)
CMV-T (Australia)	CMV-T118 (Japan)
CMV-T2373 (Taiwan)	CMV-T2374 (Taiwan)
CMV-V135	CMV-V389 (Italy)
CMV-WT (WI, USA)	CMV-Y (Japan)

Exclusivity:**Cross-reacts With:**

None known	
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Does Not Cross-reacts With:

Cucumber mosaic virus - subgroup II (CMV-II)	Peanut stunt virus (PSV)
Tomato aspermy virus (TAV)	

Diagnostic Specificity

True Negatives 9
Correct Diagnoses 9
Percent 100%

Selectivity:**No Matrix Effect Observed With:**

Cucurbit leaves	Petunia leaves	Tobacco leaves	
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