Validation Report: ELISA

PSA/SRA 81001 • Chrysanthemum virus B (CVB)



Test Characteristics

Test NameChrysanthemum virus BCatalog Number81001AcronymCVBGenusCarlavirus

Capture AntibodyPolyclonal (Rabbit)Detection AntibodyPolyclonal (Rabbit)FormatDAS-ELISADiluentsGEB/ECISample Dilution1:10

Summary

This ELISA test is a qualitative serological assay for the detection of Chrysanthemum virus B (CVB) in ornamental leaves and seed. CVB is a member of the Carlavirus genus known for their flexuous rod-shaped virus particles.

Diagnostic Sensitivity		Analytical Sensit	Analytical Sensitivity		
True Positives	15	Limit of Detection:	1:102,400 dilution of infected tissue (pathogen titer unknown)		
Correct Diagnoses	15				
Percent	100%				

Analytical Specificity

Inclusivity:

This assay was designed to detect all strains and isolates of CVB. Fifteen distinct samples of CVB have been experimentally proven to be detected, including PV-1115 (Germany).

Exclusivity:

Cross-reacts With:

None known	

Does Not Cross-react With:

Alternanthera mosaic virus & Papaya mosaic virus (AltMV/PapMV)	Cactus virus X (CVX)	
Carnation latent virus (CLV)	Cassava common mosaic virus (CCMV)	
Chrysanthemum stem necrosis virus (CSNV)	Cucumber green mottle mosaic virus (CGMMV)	
Cymbidium mosaic virus (CymMV)	Groundnut bud necrosis virus (GBNV)	
Groundnut ringspot virus (GRSV)	Helenium virus S (HVS)	
Impatiens necrotic spot virus (INSV)	Iris yellow spot virus (IYSV)	
Kyuri green mottle mosaic virus (KGMMV)	Odontonglossum ringspot virus (ORSV)	
Papaya mosaic virus (PapMV)	Pepino mosaic virus (PepMV)	
Pepper mild mottle virus (PMMoV)	Phlox virus X (PhIVS)	
Potato virus M (PVM)	Potato virus S (PVS)	
Potato virus X (PVX)	Ribgrass mosaic virus (RMV)	



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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Does Not Cross-react With:

Sunn-hemp mosaic virus (SHMV)	Tobacco mild green mosaic viurs (TMGMV)	
Tobacco mosaic virus (TMV)	Tobacco mosaic virus-c (TMV-c)	
Tomato mosaic virus (ToMV)	Tomato spotted wilt virus (TSWV)	
Watermelon silver mottle virus (WSMoV)		

Diagnostic Specificity

True Negatives 166 Correct Diagnoses 161 Percent 97%

Selectivity:

No Matrix Effect Observed With:				
Abutilon leaves	Achiella plant	Alternanthera seeds	Alstromeria leaves	
Angelonia leaves	Anemone seeds	Antirhinum Snapdragon seeds	Aster leaves	
Bacopa seeds	Browallia leaves	Buddleia plant	Calceolaria integrifolia leaves	
Calceolaria mexicana leaves	Calibrachoa leaves	Campanula leaves	Chenopodium quinoa plant	
Chrysanthemum plant	Cleome leaves	Coleus leaves	Coreopsis plant	
Cuphea leaves	Delosperma plant	Diascia leaves	Euphorbia leaves	
Fuschsia leaves	Gaillardia seeds	Gaura plant	Helichrysum seeds	
Isotoma leaves	Leucanthemum leaves	Limonium Statice seeds	Lisianthus seeds	
Lobelia leaves	Lobelia cardinalis plant	Lobelia seeds ¹	Lysimachia leaves	
Mimulus Monkey Flower seeds	Nemesia leaves	Osteospermum leaves	Osteospermum seeds	
Pachysandra leaves	Penstemon plant	Petunia leaves	Phlox plant	
Portulaca leaves	Salvia plant	Scaevola leaves	Sedum leaves	
Tetragonia tetragonioides leaves	Torenia catalina leaves	Verbascum seeds	Verbena superbena leaves	
Verbena plant	Veronica plant			
¹ One Lobelia seed sample produced elevated background				

Matrix Effect Observed With:				
Argyranthemum leaves	Lavendula			

