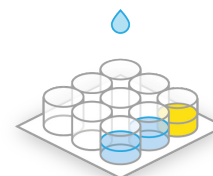


Validation Report: ELISA

PSA/SRA 27200 • *Potyvirus Group (Poty)*



Test Characteristics

Test Name	Potyvirus Group	Capture Antibody	Polystyrene plate
Catalog Number	27200	Detection Antibody	Monoclonal (Mouse)
Acronym	Poty	Format	ACP-ELISA
Genus	Potyvirus	Diluents	IEB/ECI
		Sample Dilution	1:100

Summary

Agdia's Potyvirus Group test detects most aphid-transmitted members of the Potyvirus Group. This test is based on a monoclonal antibody (PTY 1) developed by the USDA Florist and Nursery Crops Laboratory in Beltsville, Maryland, USA. The broad reactivity of this antibody is possible because it reacts to a sequence of amino acids on the virus coat protein which is highly conserved among aphid-transmitted potyviruses. This test is intended to be used as a general screening tool. We recommend confirmation of positive results by another method (PCR, etc.)

Diagnostic Sensitivity

True Positives	123
Correct Diagnoses	123
Percent	100%

Analytical Sensitivity

Limit of Detection: 1:194,400 dilution of infected tissue (pathogen titer unknown)

Analytical Specificity

Inclusivity:

Potyriviruses Detected¹:

Alstroemeria streak virus (AlStV)	Angelica virus Y (AnVY)
Asparagus virus 1 (AV-1)	Basella rugose mosaic virus (BaRMV)
Bean common mosaic virus (BCMV)	Bean yellow mosaic virus (BYMV)
Beet mosaic virus (BtMV)	Begonia flower breaking virus (BFBV) ²
Blackeye cowpea mosaic virus (BICMV)	Carnation vein mottle virus (CVMV)
Celery mosaic virus (CeMV)	Chickpea yellow mosaic virus (CpYMV)
Chilli vein banding mottle virus (CVbMV)	Columbian datura virus (CDV)
Clover yellow vein virus (CIYVV) ³	Cowpea aphid-borne mosaic virus (CABMV)
Dasheen mosaic virus (DsMV)	Euphorbia ringspot virus (EuRV)
Freesia mosaic virus (FreMV)	Garlic mosaic virus (GarMV)
Hippeastrum mosaic virus (HiMV) ⁴	Hyacinth mosaic virus (HyMV)
Impatiens flower break virus (IFBV)	Iris mild mosaic virus (IMMV)
Iris severe mosaic virus (ISMV)	Johnsongrass mosaic virus (JGMV) ⁵
Konjak mosaic virus (KoMV)	Leek yellow stripe virus (LYSV)
Lettuce mosaic virus (LMV)	Maize dwarf mosaic virus (MDMV)
Malva vein clearing virus (MVCV)	Meadow saffron breaking virus (MSBV)



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Potviruses Detected¹:

Murraya koenigii potyvirus	Muscari mosaic virus
Narcissus late seasons yellows virus (NLYSV)	Narcissus latent virus (NLV) ⁴
Narcissus mosaic virus (NMV) ⁴	Narcissus yellow stripe virus (NYSV)
Nerine yellow stripe virus (NeYSV)	Omphalodes virus Y (OmVY)
Onion yellow dwarf virus (OYDV)	Ornithogalum mosaic virus (OrMV)
Papaya ringspot virus (PRSV) ⁶	Passionfruit woodiness virus (PWV)
Pea mosaic virus (PMV)	Pea seedborne mosaic virus (PSbMV)
Peanut mottle virus (PeMoV) ⁷	Pepper mottle virus (PepMoV)
Plum pox virus (PPV)	Pokeweed mosaic virus (PkMV)
Potato virus A (PVA)	Potato virus V (PVV)
Potato virus Y (PVY)	Soybean mosaic virus (SMV)
Spiranthes mosaic virus 2 (SpiMV 2)	Statice virus Y (StaVY)
Sugarcane mosaic virus (SCMV)	Sunflower mosaic virus (SuMV)
Sweet potato feathery mottle virus (SPFMV)	Sweet potato latent virus (SPLV)
Tobacco etch virus (TEV)	Tobacco vein mottling virus (TVMV)
Tricyrtis virus Y (TrVY)	Tuberose mild mosaic virus (TMMV)
Tulip breaking virus (TBV)	Tulip chlorotic blotch virus (TCBV)
Turnip mosaic virus (TuMV)	Vallota mosaic virus (ValMV)
Watermelon mosaic virus (WMV)	White lupin mosaic virus (WLMV)
Yam mild mosaic virus (YMMV)	Yam mosaic virus (YMV)
Zucchini yellow mosaic virus (ZYMV)	

¹The list above represents Potviruses that have been shown to be detected by the Potvirus group ELISA test and does not represent all viruses that may be detected. If you have confirmed detection of a Potvirus not on this list, please contact us. We would like to work with you to further validate the Potvirus group ELISA detection capabilities.

²Begonia flower breaking virus (BFBV) is [reported](#) to be detected.

³Most isolates of Clover yellow vein virus (CIYVV) are detected.

⁴Hippeastrum mosaic virus (HiMV), Narcissus latent virus (NLV), and Narcissus mosaic virus (NMV) have been [reported](#) to be detected.

⁵Weak reaction observed with in-house isolates of JGMV. May not be reliably detected with low titer samples.

⁶Most isolates of Papaya ringspot virus (PRSV) are detected.

⁷Some isolates of Peanut mottle virus (PeMoV) are detected.

Exclusivity:

Cross-reacts With:

Ryegrass mosaic virus (RgMV)	
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Does Not Cross-react With:

Apple mosaic virus	Carnation mottle virus
Carnation necrotic fleck virus	Chrysanthemum virus B
Cucumber mosaic virus	Cymbidium mosaic virus
Lily symptomless virus	Prunus necrotic ringspot virus
Tobacco mosaic virus	Tobacco ringspot virus
Tomato ringspot virus	Wheat spindle streak mosaic virus



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Diagnostic Specificity

True Negatives 99
 Correct Diagnoses 99
 Percent 100%

Selectivity:

No Matrix Effect Observed With:			
African violet leaves	Apricot leaves	Asparagus leaves	Aster leaves
Azalea leaves	Banana leaves	Barley leaves	Bean leaves
Begonia leaves	Cabbage leaves	Carnation leaves	Celery leaves
Cherry leaves	Chrysanthemum leaves	Clematis leaves	Corn leaves
Cucumber leaves	Cucurbit leaves ¹	Dahlia leaves	Dianthus leaves
Eggplant leaves	Endive leaves	Garlic leaves	Geranium leaves
Gladiolus leaves	Grape leaves	Hibiscus leaves	Hydrangea leaves
Impatiens leaves	Ipomoea leaves	Kalanchoe leaves	Lettuce leaves
Lily leaves	Lysmanchia leaves	Melon leaves	Nicotiana benthamiana leaves
Onion leaves	Orchid leaves	Palm tree leaves	Papaya leaves
Parthenocissus leaves	Pea leaves	Peach leaves	Petunia leaves
Pepper leaves	Phlox leaves	Plum leaves	Potato leaves
Raspberry leaves	Spinach leaves	Squash leaves	Statice leaves
Strawberry leaves	Sugarcane leaves	Tobacco leaves	Tomato leaves
Tulip leaves	Watercress leaves	Watermelon leaves	Wheat leaves
¹ Cucurbit tissue has been shown to give high background and/or false positives 5 - 18% of the time.			

Matrix Effect Observed With:			
Cucurbit leaves ¹	Scaevola leaves ²		
¹ Cucurbit tissue has been shown to give high background and/or false positives 5 - 18% of the time.			
² Scaevola tissue has been shown to consistently give high background and/or false positives.			



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