ImmunoStrip® Validation Report

On-site Plant Pathogen Testing

Tobacco ringspot virus (TRSV)

ISK/STX 64001

ImmunoStrip®

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Test Characteristics

Test Name	Tobacco ringspot virus	**Capture Antibody**	Polyclonal (Rabbit)
Catalog Number	64001	**Detection Antibody**	Polyclonal (Rabbit)
Acronym	TRSV	**Format**	Lateral Flow Device
Genus	Nepovirus	**Diluents**	SEB1
		Sample Dilution	1:20

Summary

The Tobacco ringspot virus (TRSV) ImmunoStrip is used to detect the presence of TRSV in a wide range of ornamental, fruit, vegetable and field crops. TRSV is a member of the Nepovirus genus known for their transmission by nematodes. According to the European and Mediterranean Plant Protection Organization (EPPO) (Bulletin) TRSV can be transmitted mechanically and vectored by at least one nematode species and a variety of insects. In addition it can be transmitted by seed in several plant species. ImmunoStrips are the perfect screening tool for use in the field, greenhouse, and the lab.

Diagnostic Sensitivity

True Positives	15
Correct Diagnoses	15
Percent	100%

Analytical Sensitivity

Limit of Detection: 1:2,187 dilution of infected tissue (pathogen titer unknown)

Analytical Specificity

Inclusivity:

This assay was designed to detect all strains and isolates of TRSV. Fifteen distinct samples of TRSV have been experimentally proven to be detected.

Exclusivity:

Cross-reacts With:

None known	

Does Not Cross-react With:

Alfalfa mosaic virus (AMV)	Alternanthera mosaic virus (AltMV)
Angelonia flower break virus (AnFBV)	Arabis mosaic virus (ArMV)
Broad bean wilt virus-1 (BBWV-1)	Broad bean wilt virus-2 (BBWV-2)
Blueberry scorch virus (BlScV)	Blueberry leaf mottle virus (BLMoV)
Bean pod mottle virus (BPMV)	Cherry leaf roll virus (CLRV)
Cucumber mosaic virus (CMV)	Chrysanthemum virus B (CVB)
Grapevine fanleaf virus (GFLV)	Impatiens necrotic spot virus (INSV)
Melon necrotic spot virus (MNSV)	Nemesia ring necrosis virus (NeRNV)
Papaya mosaic virus (PapMV)	Peach rosette mosaic virus (PRMV)
Southern bean mosaic virus (SBMV)	Strawberry latent ringspot virus (SLRSV)
Tomato aspermy virus (TAV)	Tomato ringspot virus (ToRSV)

Diagnostic Specificity

True Negatives	102
Correct Diagnoses	102
Percent	100%

Selectivity:

No Matrix Effect Observed With:			
Acorus leaves	Almond leaves	Alternanthera leaves	Antirrhinum leaves
Argyranthemum leaves	Ajuga leaves	Anemone leaves	Angelonia leaves
Aster leaves	Bacopa/Sutera leaves	Banana pepper leaves	Begonia leaves
Blackberry leaves	Blueberry leaves	Browalia leaves	Calibrachoa leaves
Calla lily leaves	Cleome leaves	Celosia leaves	Coleus leaves
Cleome leaves	Cucumber leaves	Dahlia leaves	Dandelion leaves
Daylilly leaves	Diascia leaves	Dianthus leaves	Gaillardia leaves
Geranium/Pelargonium leaves	Grape leaves	Gynura leaves	Helichyrsum leaves
Holly leaves	Honeydew leaves	Horseradish leaves	Hosta leaves
Impatiens leaves	Ipomoea leaves	Jalapeño leaves	Lavender leaves
Lilac leaves	Lobelia leaves	Limonium leaves	Maple leaves
Melon leaves	Mimulus leaves	Nandina leaves	Nemesia leaves
Nepeta leaves	Oleander leaves	Olive leaves	Orange leaves
Osteospermum leaves	Peach leaves	Papaya leaves	Pepper leaves
Periosteum leaves	Petunia leaves	Phlox leaves	Portulaca/Purslane leaves
Primrose leaves	Pumpkin leaves	Rose leaves	Rosemary leaves
Salvia leaves	Scabeosa leaves	Scavleoa leaves	Sedum leaves
Soybean leaves	Squash leaves	Tobacco leaves	Torenia leaves
Tomato leaves	Verbascum leaves	Verbena leaves	Veronica leaves
Watermelon leaves	Zucchini leaves		

Repeatability

Number of Samples	101
Replicates per Sample	2 - 8
Average Percent Agreement Between Replicates	100%

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